The OIL and GAS JOURNAL

PRODUCING REFINING ENGINEERING MARKETING

VOL. 29. NO. 8. TULSA, OKLAHOMA, JULY 10, 1930

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Production Decline in Most Fields

Highest daily average estimated total production in 1929, week ended Aug. 24, 2,975,435 bbls. Lowest in 1929, Dec. 27, 2,595,320 bbls.

Lea County, New Mexico, the Only Serious Menace to the Producing Structure. Need for State Co-operation

Highest daily average estimated light oil production in 1929, week ended Sept. 14, 2,534,524 bbls. Lowest in 1929, Apr. 13, 2,142,036 bbls.

By James McIntyre

With the exception of Lea County, New Mexico, and the Salt Creek Field in Wyoming, each of which showed a relatively large increase in production, giving the Rocky Mountain area an increase of 13,328 barrels, the fields of the United States experienced a general let-down in the volume of production they put forth in the past week. There was a net decline of 8,968 barrels per day in the whole country.

Outside of Texas all the major producing divisions are keeping close to the allotted production average suggested by the Federal Oil Conservation Board's committee on economics. Texas is 112,697 barrels per day above its allottment while the total overproduction is 115,283 barrels per day.

The announcement of the Prairie Oil & Gas Company in the past week that it would reduce its crude purchases 25 per cent, and its total runs about 40,000 barrels a day, in Kansas, Oklahoma and Texas, was received with serious misgivings by producers who feared that other major purchasers might follow the Prairie company's lead. A decline in refinery demand is given as the cause of the Prairie's action.

The only serious menace to the production structure is Lea County, New Mexico, where production is mounting weekly. As yet the State government has made no sign that it will co-operate with the authorities in other states to keep production to the level of refinery requirements, and while efforts are being made from the most easterly to the most westerly fields in the United States to produce oil at a level that will maintain industrial stability, Lea County producers, especially in the Hobbs Pool are bringing in wells that have made that county a major producing area. The Hobbs Pool has a potential production of 60,000 barrels a day from less than a score of wells already in, and nothing but lack of pipe line facilities has held back production, and this lack will shortly be filled by the completion of two pipe line extensions into the pool.

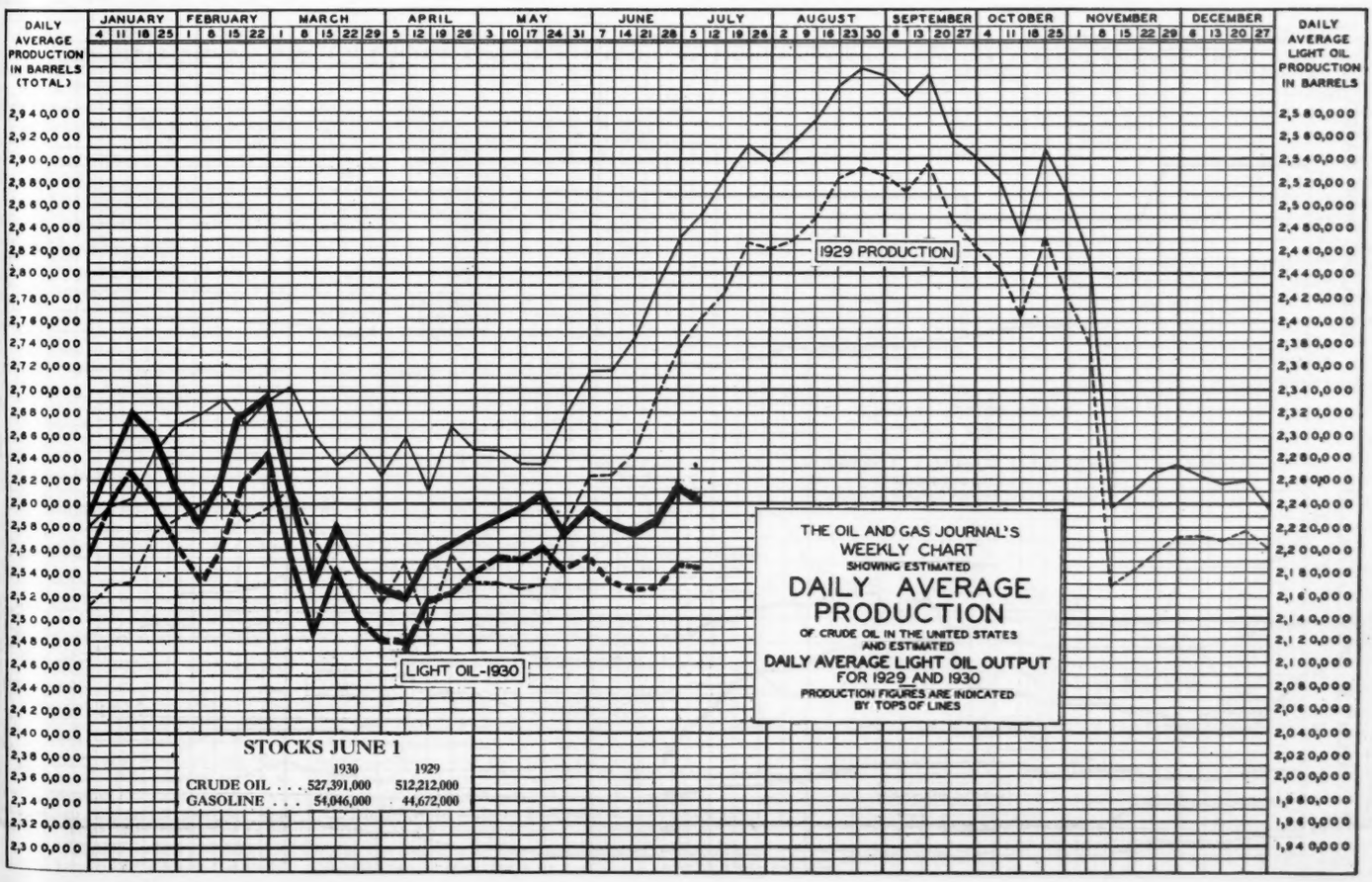
Production of the United States in the past week was 240,885 barrels per day below the average in the same week last year.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity oil in the United States for week ended July 5 and a comparison with the previous week follows:

	July 5		June 28	
	Light	Heavy	Light	Heavy
Oklahoma—				
Oklahoma City	105,625	.....	107,410	.....
St. Louis-Pearson	29,330	.....	32,085	.....
Seminole	202,895	.....	213,945	.....
Northern miscellaneous	257,900	.....	253,595	.....
Southern fields	59,370	.....	59,220	.....
Total Oklahoma	655,120	.....	666,255	.....
West Texas—				
Hendricks	69,215	.....	69,245	.....
Yates	120,650	.....	119,590	.....
Remainder	117,003	.....	117,112	.....
Total West Texas	306,868	.....	305,947	.....
North Louisiana	34,920	5,120	35,050	5,150
Arkansas	17,810	37,520	17,825	39,460
North Central Texas	139,673	.....	140,942	.....
Texas Panhandle	105,085	.....	108,380	.....
East Central Texas	41,348	.....	40,884	.....
Kansas	131,235	.....	133,945	.....
Total Mid-Continent area	1,432,059	42,640	1,449,228	44,610
Gulf Coast	.....	204,423	.....	205,481
Southwest Texas	.....	90,319	.....	93,418
Eastern	134,000	.....	134,000	.....
Rocky Mountain area	102,342	.....	89,014	.....
California—				
Santa Fe Springs	116,000	.....	115,500	.....
Long Beach	96,500	.....	93,500	.....
Huntington Beach	28,000	.....	28,000	.....
Elwood	42,500	.....	43,000	.....
Ventura Avenue	48,000	.....	48,500	.....
Seal Beach	21,500	.....	20,500	.....
Remainder of State	164,000	88,000	165,000	89,500
Total California	516,500	88,000	514,000	89,500
Total United States	2,184,901	425,382	2,186,242	433,009
Grand total	2,610,283		2,619,251	

Total Decrease 8,968 Bbls.; Light Oil Decrease 1,341 Bbls.



Curtailed Operations Market Factor

Refiners Expect Improved Market Situation. Gasoline Movement Heavy but Prices Unchanged. Naturals and Kerosene Weak

By C. O. Willson

A curtailment in operations at several refineries both within and outside the Mid-Continent area reflected in announcements that crude oil purchases would be curtailed was the development of the past week which promises to be an important factor in the future trend in Oklahoma (Group)3 prices on refinery products.

So far as the present market is concerned little change in prices was apparent, the declines in fact being more important than the advances, a situation which has been the rule for several weeks. The steady seasonal increase in gasoline demand is unquestionably under way but except for the rally from the late June quotations, noted last week, there has been no improvement in prices. The balance between supply and demand, taking into consideration the seasonal reduction in inventories, which makes for firm markets obviously has not arrived for the country as a whole and individual refiners who are endeavoring to benefit from curtailed plant operations as yet have had little encouragement. A continued slump in natural gasolines, which have declined to the lowest point in over two years, has not helped the refinery gasolines and the latter have had trouble holding their own over the past few days.

Practically all refinery products continue extremely soft so far as day to day sales are concerned. Except for the regular outlets there has been practically no demand for kerosenes and a few refiners in endeavoring to secure business have offered material one-fourth to one-half cent under the lows prevailing a week ago. All classes of fuels from the low gravity residual oils to the high gravity distillates are moving slowly with wide ranges in prices. A near chaotic condition exists in the lub market, especially the cylinder stocks, and a spot market in the usual meaning of the term does not exist. Wax is moving slowly despite the low prices.

Future Trends

Both buyers and sellers are endeavoring to interpret the developments of the past week in the light of the probable future market. With prices on practically all refinery products at the low points of the past several years, it is generally felt that the refined market has already discounted all the possible unfavorable factors in the oil industry and some improvement is to be expected in the near future.

The fact that one large crude oil buyer in the Mid-Continent as explained elsewhere in this issue has found it necessary to curtail crude oil purchases 40,000 bbls. daily is taken as evidence that refiners in the middle western states have curtailed their plant operations.

Although the smaller refiners of the Mid-Continent Field are generally blamed for any slump in gasoline prices, most market observers agree that several major operators have contributed materially to the price weakness in effect over the greater part of the past year. In this connection the increasing importance of the large operations of middle western refiners is outstanding. Until two years ago, refiners in that area were minor factors in the spot market especially during the summer months when the demands of their own stations and jobber contracts took all of their gasoline output.

Due to the rapid expansion in plant operations in the Middle West, conditions have changed during the past two years. Through the construction of new plants and the enlargement of old refineries the gasoline supply has exceeded the normal increase in demand and the competitive situation with Mid-Continent refiners has become more and more keen. To take care of their enlarged refinery output, refiners in the states of Illinois, Indiana, Michigan and Ohio have not only purchased many of the most desirable independent jobbers but they have tied up other jobbing accounts with yearly contracts. In addition three or four of the refiners have excess material which they have been offering from time to time on the spot market.

Some of the lowest priced gasoline of

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REFINED MARKET BAROMETER

A heavy gasoline consumption over the week-end brought few changes in refinery gasoline prices the first of the new week. Supplies were still more than adequate in several territories and prices receded following the rally of the previous week. Refinery curtailment programs promised to strengthen the market in some areas. On the West Coast price wars in the retail markets continue to dominate the refinery prices, quotations for local delivery in the Los Angeles territory being especially low. The few changes in prices for other products were generally downward. Kerosenes continue soft both in export and domestic markets. Fuel oils are enjoying a strong marine demand but otherwise the market is dull. Widespread reductions were again made in steam refined stocks and bright stocks. The wax business was confined to small orders.

East Coast—Curtailment of plant operations by several refiners brings better feeling in the market. Gasoline prices holding with heavy seasonal movement. Kerosene weak. Fuel oil and gas oil unchanged. Steam refined stocks and bright stocks lower. Wax inactive.

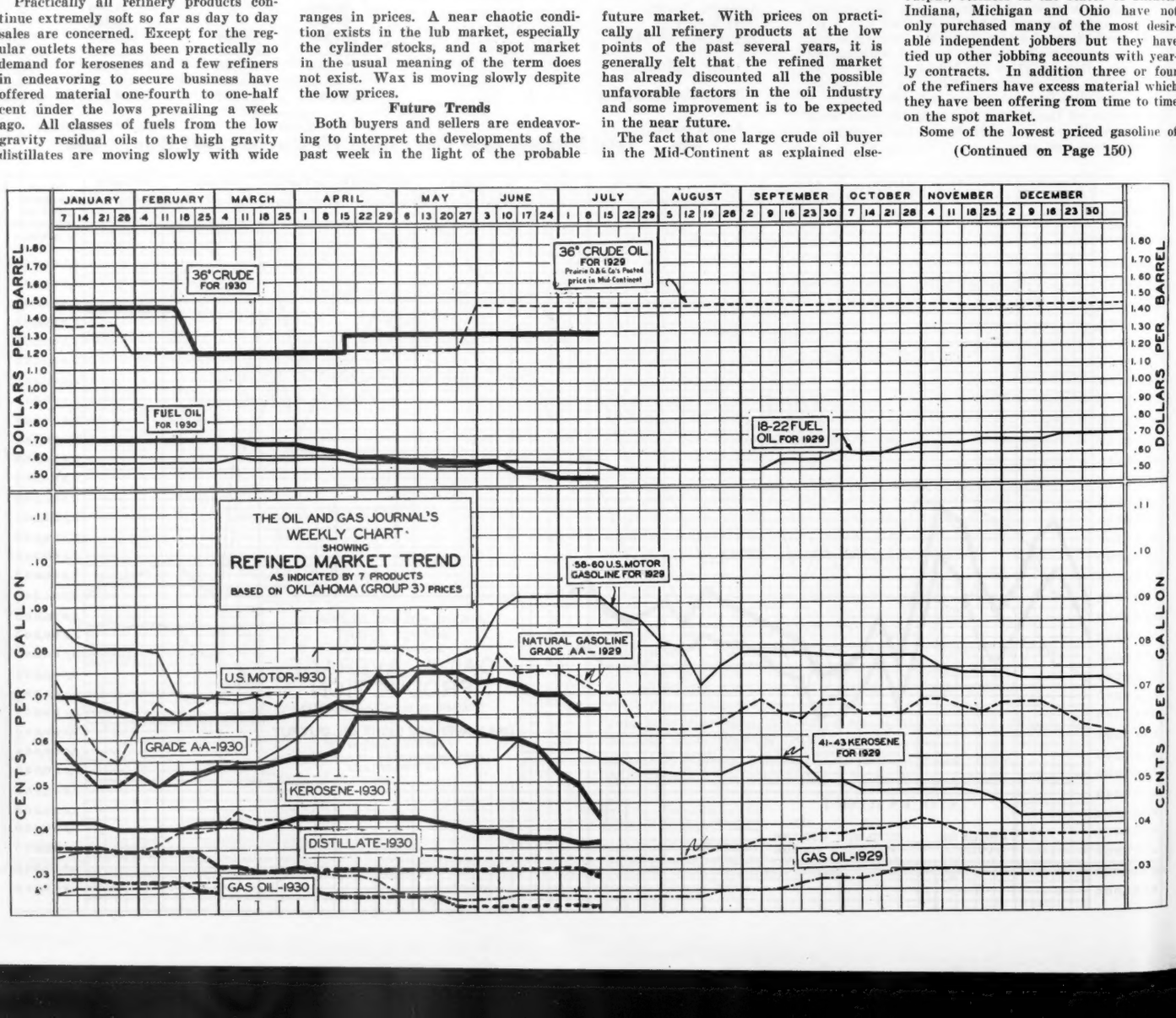
Mid-Continent—Continued improvement in gasoline demand with no important price changes. Kerosene inactive and prices lower. Fuel oils slow. Fair demand for furnace oils. Cylinder stock prices lower. Wax weak.

Pennsylvania—Steam refined stock and bright stock prices lower. Some grades of neutral oils lower. Kerosene prices reduced. No important changes in gasoline prices.

Chicago—Heavy gasoline consumption over week-end reflected in gasoline demand at refineries where prices were firm. Kerosene weak. Slow demand for fuel oils at low prices. Lubricants weak.

California—Refinery gasolines reflect weakness in retail prices. Natural gasolines lower.

Gulf Coast—Market steady except gasolines which are weak. Fair demand for neutral oils.



Oklahoma City's Drilling Peak Passed

Water Wells Marking Southwest Boundary of Field and Activities in Other Directions Indicate Decline in New Operations

By L. G. E. Bignell
Petroleum Engineering Editor

OKLAHOMA CITY, Okla., July 7.—A survey of the Oklahoma City Field shows that though about 390 wells are drilling or ready to start, there are about 25 rotary outfits laid down awaiting contracts, indicating that the peak of drilling activity has been passed.

During the past 18 months every contractor in this field has been busy, with all his outfits at work, and men familiar with the conditions in the Oklahoma City area remarked upon the rotary outfits now idle. They pointed out that this, along with the completions in the south pool and the water wells in the extreme south end of the field, apparently marked the passing of expansion in this area.

There are a number of new locations made for wells at the north end of the pool, either just outside the city limits or in the U-7 zone within the city that are being prepared for operations. Many of them are in the river bottom, so the problems of securing satisfactory foundations for rigs, boilers and other drilling equipment are being solved in many ways.

The north fork of the Canadian River flows through Oklahoma City in an easterly direction and divides the town, about one-third of it being south of the river. The business section of the State Capitol Building is to the north of the river.

At this time the locations for the most part are confined to the area at the east edge of the city, but they are gradually being worked westward along the river channel and will only be cut off by small wells or water being developed.

From recent completions it would seem that the western edge of the field will be east of the Santa Fe right of way, but there are still good possibilities of the field continuing to the north of the river for some distance. This northerly extension will be in the eastern portion of the city, involving property damages in residential districts.

New City Ordinance

City officials, who with other residents of Oklahoma City are alive to these possibilities, have revised a city ordinance which had its second reading on the afternoon of July 3 before the city council and has been made a law.

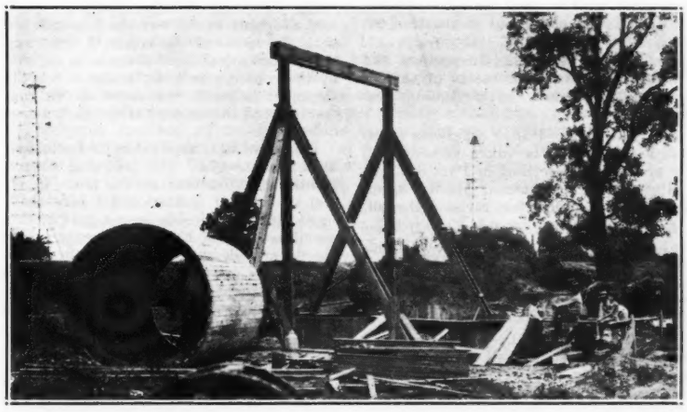
This ordinance was carefully drawn from both legal and practical standpoints. It provides restrictions in the methods of carrying on drilling operations designed to safeguard property. Many of the practical provisions were suggested by production men who have had a great deal of experience with wells in the south pool, and the legal provisions were drawn from such other city ordinances as are available, notably the one sustained by the Supreme Court of the United States covering drilling conditions in Oxford, Kans.

The ordinance provides that there shall be only one well to a "block" and defines a "block" as "meaning one contiguous tract of not less than five (5) acres in area."

It further stipulates that "in unplatted tracts no well shall be drilled or put down upon any block or tract of less than five (5) acres in area, and in platted tracts no such well shall be drilled or put down upon any block of less than two and one-half (2½) acres except as otherwise provided."

This section C further provides that the board of adjustment shall have power to attach unplatted tracts adjacent to blocks used for drilling sites to the drilled area and provides that the owners of the unplatted tracts shall participate in wells drilled and in this way enjoy the proceeds derived from the oil under their lands even though their tracts are smaller than required by the city ordinance for the location of wells.

This provision is made to prevent the drainage of areas adjacent to a drilling zone by wells that may be started in the drilling zone and there is a further provision that no well shall be located closer than 75 feet from the property line of the tract on which such well is situated.



Sinking caisson and digging runway and vent on Velt No. 1 location Phillips Petroleum Co. in river channel Oklahoma City Field.

Other Provisions

The ordinance specifically prescribes the classes of pipe, casing and fittings permissible; the size and strength of oil tanks; dimensions of cellars and piers under derricks; regulates the cementing practices for casing; outlines classes of oil and gas separators allowable and their relative position to well and property lines. Boilers are regulated by existing ordinances and subject to inspections by the city boiler inspector. Electric wiring also comes under the city code. The superintendent of buildings and chief of the fire department have jurisdiction over the time and method of bailing mud or fluid from wells.

The ordinance provides that each string of casing or pipe within any well through which oil or gas is to be produced, shall be equipped with three master gates of 3,000 to 4,000 pounds capacity securely fastened thereto. These gates shall be so equipped that they can be operated at points not less than 50 feet distant from such well.

Section 16 reads as follows: "Drilling below 3,000 feet shall be done with mud weighing at least 9½ pounds per gallon. Before drilling into the checkerboard lime at approximately 5,000 feet, the weight of mud shall be increased to 11½ pounds per gallon. The hole shall be kept full of mud at designated weight at all times. The mud shall be weighed at such intervals as may be determined by the inspector. When withdrawing the drill pipe the casing shall be filled with mud after each 11 stands shall have been withdrawn. If, at any time, the weight of such mud shall be less than that specified, any inspector or officer of the city of Oklahoma City shall have the right to suspend drilling and all operations in or about such well until the weight of such mud shall comply herewith."

Authority to Enforce Ordinances

Full police authority is given the chief of the fire department and superintendent of buildings or any of their authorized representatives to enforce all fire ordinances around drilling wells.

Section 21 provides that "no permit for drilling or putting down of any petroleum or natural gas well shall be issued to any person, firm or corporation, and no well for which permit has been heretofore issued shall be drilled into any producing oil or gas horizon, until there shall be filed with the city clerk of the city of Oklahoma City a good and sufficient bond covering each well for which permit is applied, and executed by some bonding or indemnity company * * *."

It further stipulates that "the maximum total liability, under said bond, for loss or damage, either to person or property shall be $200,000."

Section 22 provides that a fee of $1,000 shall be paid before a drilling permit is issued. It is understood that this money is to be used by the city for expenses incident to the enforcement of this ordinance.

While there is some opposition to provisions of the ordinance it is reported that the larger companies and operators who contemplate drilling wells in the U-7 oil and gas district are favorable to it. Having carefully investigated the legal side of the ordinance, the city attorney's office decided that it could be enforced although it expects test cases to be started as soon as the law becomes operative.

New Mechanical Problems

As the field has moved northward there has been a change in the topography of the surface and many of the most recent locations have been made in the channel of the north fork of the Canadian River. This channel is over a mile wide and is included in the U-7 oil and gas zone, and as it is largely made up of vacant land it affords opportunities for drilling operations without necessitating the removal of buildings.

The river is a small stream under all but high water conditions but the river channel is formed by a deposit of sand having a thickness of approximately 50 feet. The bed rock under this channel is the red rock such as found in the south field.

At the low water stage of the river the upper 10 or 12 feet of surface sand is dry and it is not difficult to sink piling in it or dig cellars or pits for foundations. But when the water-soaked sand is encountered the conditions change and the problem of sinking pits or piling in this quicksand is one of major importance.

Some operators have not made any special attempt to provide other than normal types of foundations under their derricks. These piers are about 6'x9' at base and made of concrete, with other concrete foundations provided for the pumps and engines. The boilers have

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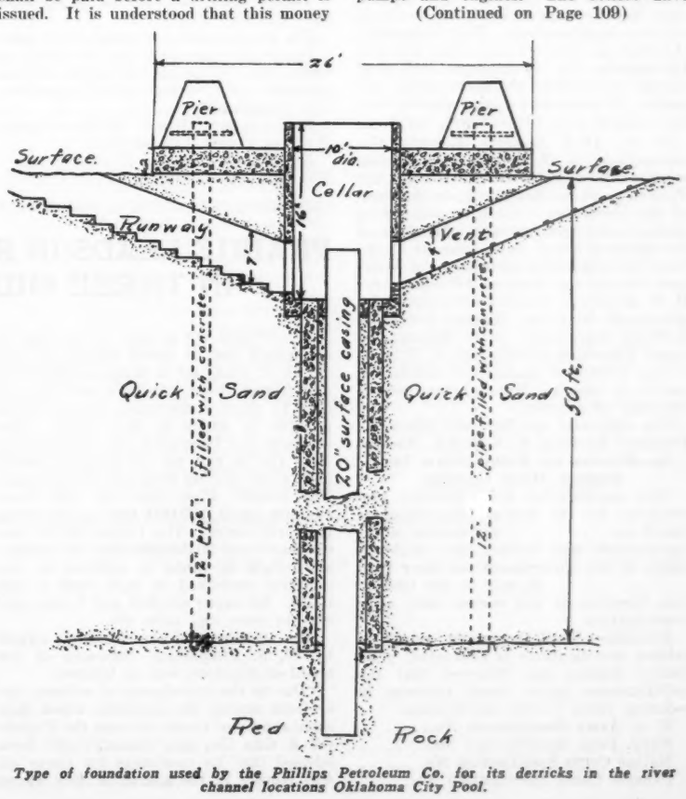


Type of foundation used by the Phillips Petroleum Co. for its derricks in the river channel locations Oklahoma City Pool.

Announce Proposed Gasoline Changes

Government Considering Four Grades to Replace Present U. S. Motor Gasoline and Motor Fuel V Adopted Last Year

The revisions contemplated by the technical committee on lubricants and liquid fuels of the Federal Specifications Board applying for U. S. Motor Gasoline and Motor Fuel V were announced last week through the American Petroleum Institute.

These revisions were discussed at a joint meeting of committee D-2 on petroleum products and lubricants, American Society for Testing Materials, and the committee on testing methods and specifications, Division of Refining, American Petroleum Institute, at an Atlantic City meeting, June 24. The available proceedings of this meeting were published in the July 3 issue of The Oil and Gas Journal.

The contemplated revision calls for replacing the specifications for U. S. Motor Gasoline and Motor Fuel V, which became effective September 11, 1929, by four complete specifications. These will cover U. S. Motor Gasoline, Motor Fuel F, Motor Fuel T and Motor Fuel V, specifications for Motor Fuels F and T replacing the alternative provisions of the present U. S. Government Motor Gasoline for a lower maximum 10 per cent point and a higher minimum 10 per cent point, respectively.

It is proposed to write the specifications in terms of per cent evaporated rather than per cent recovered, and to substitute vapor pressure limits for minimum 10 per cent points. The nature of the product covered also has been modified.

The suggested revision was transmitted to Dr. T. G. Delbridge, chairman of the advisory board, on May 14, and was discussed at the June 24 meeting in order to obtain the recommendations of the two groups for the information of their representatives on the advisory board.

The American Petroleum Institute has another committee dealing with gasoline specifications primarily from the point of view of state legislation rather than with purely technical aspects. The government specifications generally are the basis of state specifications. This committee, of which J. Howard Pew, Sun Oil Co., Philadelphia, Pa., is chairman, will meet shortly to consider the government proposals. It is possible a joint meeting may be arranged with the advisory board.

F. A. Hull, General Electric Co., Schenectady, N. Y., is chairman of committee D-2, and K. G. Mackenzie, The Texas Company, New York, is chairman of the institute's committee on testing methods and specifications. Members of the advisory board, in addition to Chairman Delbridge, who represents the American Society for Testing Materials, are: R. P. Anderson, American Petroleum Institute; H. W. Camp, Western Petroleum Refiners Association; O. P. Keeney, National Petroleum Association; C. F. Kettering, Society of Automotive Engineers, and G. G. Oberfell, Natural Gasoline Association of America.

The suggested specifications follow:

Proposed Revision F. S. 622-A, Federal Specification for United States Government Motor Gasoline

This specification was officially promulgated by the Federal Specifications Board on.....for the use of the departments and independent establishments of the Government not later than ..... It may be put into effect, however, at any earlier date, after promulgation.

Preamble—Until the present supply of printed specifications is exhausted, prospective bidders are informed that the specifications below listed conform in technical detail to this specification:

U. S. Army Specification No.....
Navy. Dept. Specification No.....
Marine Corps Specification No.....
Panama Canal Specification No.....

Federal Specifications—1a. The issue of United States Government Specification No. 2, in effect on date of invitation for bids, shall, in so far as applicable, form a part of this specification.

1b. Any requirements applicable to the individual departments are noted under Section 7.

Grades—2. United States Government Motor Gasoline shall be of but one grade.

Material and Workmanship—3. See Section 4.

General Requirements—4. U. S. Government Motor Gasoline shall be volatile hydrocarbon fuel free from water and suspended matter, and shall be suitable for use as fuel in internal combustion engines.

Method of Sampling, Inspection and Tests—5a. Any requirements of the individual departments are noted under Section 7.

5b. Sampling—Unless otherwise specified, samples shall be taken according to the procedures described in Part 3 of the United States Government Master Specification No. 2d, or latest revision thereof.

5c. Inspection and Tests — All tests shall be made according to the methods for testing contained in Part 2 of United States Government Master Specification No. 2d (Bureau of Mines Technical Paper 323B), or latest revision thereof.

5d. Corrosion Test.—Method 530.22. A clean copper strip shall not show more than extremely slight discoloration when submerged in the gasoline for three hours at 122° F.

5e. Distillation Range, Method—When the thermometer reads 75° C. (167° F.) not less than 10 per cent shall be evaporated.

When the thermometer reads 140° C. (284° F.) not less than 50 per cent shall be evaporated.

When the thermometer reads 200° C. (392° F.) not less than 90 per cent shall be evaporated.

The endpoint shall not be higher than 225° C. (437° F.).

The residue shall not exceed 2 per cent.

Per cent evaporated shall be found by adding the distillation loss to the amount collected in the receiver at each specififcation temperature.

5f. Sulphur, Method 520.11—Sulphur shall not exceed 0.10 per cent.

5g. Vapor Pressure, Method ..... The vapor pressure at.....37.8° C. (100° F.) shall not exceed 10 pounds per square inch.

Packaging, Packing and Marking—6a. Any requirements applicable to the individual departments are noted under Section 7.

6b. Packaging—Delivery as specified by the purchaser.

6c. Packing—Unless otherwise specified, the subject commodity shall be delivered in standard commercial retainers, so constructed as to insure acceptance by common or other carriers for safe transportation, at the correct rate, to the point of delivery.

6d. Marking—Unless otherwise specified, shipping containers shall be marked with the name of the material, type and the quantity contained therein, as defined by the contract or order under which the shipment is made, the name of the contractor, and the number of the contract or order.

Requirements Applicable to Individual Departments—7a. The following departmental specifications of the issue in effect on date of invitation for bids shall, in so far as applicable form a part of this specification and bidders and contractors should provide themselves with the necessary copies when submitting bids to the respective departments.

7b. Army—U. S. Army Specifications No. 100-2.

7c. Navy—Navy Department general specification for inspection of material.

8a. This specification covers the grade of gasoline used by the United States Government and its agencies as a fuel for automobile, truck, tractor, motor boat and similar engines.

8b. Gasoline purchased under this specification shall be described as "U. S. Government motor gasoline," with the understanding that this designation always refers to the current specification of the Federal Specifications Board.

8c. Copies of this specification may be obtained upon application, accompanied by cash or money order, to the Superintendent of Documents, Government Printing Office, Washington, D. C.

8d. The advantage of interested individuals may be served by the procurement of the Index of Federal Specifications, obtainable upon application, accompanied by cash or money order to the Superintendent of Documents, Government Printing Office, Washington, D. C., price .... cents.

Notice: When drawings, specifications, or other data are furnished to manufacturers, or others, for any purpose, other than in connection with a definitely related government procurement operation, the United States Government thereby incurs no responsibility nor any obligation whatsoever, and the furnishing of the said drawings, specifications, or other data by the Government is not to be regarded, by implication or otherwise, as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use or sell any patented invention that may in any way be related thereto.

Proposed Revision for U.S.G.M.S. 623, Federal Specification for Motor Fuel V.

The specifications for this product are the same as for United States Government Motor Gasoline except the distillation range which is as follows:

5e. Distillation Range.—Method .... When the thermometer reads 70° C. (158° F.) not less than 10 per cent shall be evaporated.

When the thermometer reads 125° C. (257° F.) not less than 50 per cent shall be evaporated.

When the thermometer reads 175° C. (347° F.) not less than 90 per cent shall be evaporated.

The endpoint shall not be higher than 205° C. (401° F.).

The residue shall not exceed 2 per cent.

Per cent evaporated shall be found by adding the distillation loss to the amount collected in the receiver at each specification temperature.

Proposed Revision F. S. 622 A, Federal Specifications for Motor Fuel T.

The specifications for this product are the same as for United States Government Motor Gasoline except distillation range which is as follows:

5e. Distillation Range.—Method ... When the thermometer reads 75° C. (167° F.) not less than 10 per cent shall be evaporated.

When the thermometer reads 140° C. (284° F.) not less than 50 per cent shall be evaporated.

When the thermometer reads 200° C. (392° F.) not less than 90 per cent shall be evaporated.

The endpoint shall not be higher than 225° C. (437° F.).

The residue shall not exceed 2 per cent.

Per cent evaporated shall be found by adding the distillation loss to the amount collected in the receiver at each specification temperature.

Proposed Revision F. S. 622 A, Federal Specification for Motor Fuel F.

The specifications for this product are the same as for United States Government Motor Gasoline except the distillation range which is as follows:

5e. Distillation Range.—Method .... When the thermometer reads 65° C. (149° F.) not less than 10 per cent shall be evaporated.

When the thermometer reads 140° C. (284° F.) not less than 50 per cent shall be evaporated.

When the thermometer reads 200° C. (392° F.) not less than 90 per cent shall be evaporated.

The endpoint shall not be higher than 225° C. (437° F.).

The residue shall not exceed 2 per cent.

Per cent evaporated shall be found by adding the distillation loss to the amount collected in the receiver at each specification temperature.

PRAIRIE LEADS IN REDUCING RUNS IN THREE MID-CONTINENT STATES

The Prairie Oil & Gas Co. on July 3 announced that it would reduce its purchases of crude oil in Kansas, Oklahoma and Texas fields approximately 25 per cent to meet a decreased demand from refiners to which it sells crude. The company has instructed the Prairie Pipe Line Co. to run for its account 40,000 bbls. a day less oil than was run in June. The Prairie Pipe Line Co. has been running about 195,000 bbls. a day from the three states. The Prairie Oil & Gas Co. has about 50,000,000 bbls. of marketable crude in tanks in addition to the quantity contained in pipe lines at all times. Its tanks are full and it does not care to store any more oil.

The statement of the company, signed by W. S. Fitzpatrick, chairman of the board of directors, was as follows:

"Due to the curtailment of refinery operations among the concerns which buy their supply of crude oil from the Prairie Oil & Gas Co., this company has been advised that its customers for crude oil will require in the month of July about 40,000 bbls. per day less crude oil for the operations of their plants than was required in May and June.

"This reduction in market demands makes it necessary for the Prairie company to reduce its purchases in the field in like amount.

"We are, therefore, today directing the Prairie Pipe Line Co. to run for our account from the properties connected to its lines approximately 40,000 bbls. per day less oil than was run in June.

"An effort is being made to prorate this reduction among our own properties and those of our patrons in the most uniform and equitable manner possible. It is our purpose to give our patrons the benefits of the largest market available to us and in making this reduction it is not done with a view to reducing stocks now on hand."

The Skelly Oil Co. announced on Saturday that it would reduce its runs in the Voshell, Kansas, Pool and the Derby Oil Co. made a similar announcement as to the Voshell Pool the same day.

SHEEHAN CO. GETS CONTRACT

The Sheehan Pipe Line Construction Co. of Tulsa has been awarded the contract for building the 32 miles of 20-inch gas line from Dilworth, Okla., to Wellington, Kans., for the Cities Service Co.

Sulphur Per Cent in Gasoline Small

Bureau of Mines Survey Shows Great Majority of Motor Fuels Meet Present Government Requirements. Results Shown

By A. J. Kraemer
Bureau of Mines[1]

The effect of sulphur content of motor fuels on automobile engines has been discussed by Diggs[3] and by Mougey[4]. The economic aspects of the task of the refiner in reducing sulphur content are presented by Morrell and Egloff[5] and Egloff and Lowry[6]. Additional comments on these phases of the question are found in a review of refinery technology by Miller[7] and in two editorials in Industrial and Engineering Chemistry[8].

Some of these commentators discuss the effect of high sulphur gasoline on automobile engines, emphasizing that with moderately high sulphur contents the ill effects are obtained only under certain conditions of operation and climate; others deprecate the economic loss entailed by the necessity of reducing sulphur content to meet specification requirements. Mougey[4] contrasts the enormous investment in automobiles by the American public with the relatively small estimated saving in petroleum refining which would accrue as a result of an increase in the tolerance for sulphur in gasoline.

More recently it has been contended by some refiners that in treating to reduce sulphur content, the antiknock rating of the gasoline is reduced; and also that some stocks which would readily produce good gasoline with a high antiknock rating, but with high sulphur content, are not now being used to produce gasoline, but on the other hand are being diverted to other and presumably economically inferior uses. In fact, some refiners consider that the increased antiknock rating that is obtained when a gasoline is not treated solely to reduce sulphur content is preferable to low sulphur content.

Detailed discussion of these economic and technologic aspects of the problem is beyond the scope of this paper, and no opinion is expressed in regard to what should be the maximum sulphur content of motor fuel. The Bureau of Mines has published a report of a study of the sulphur content of the motor fuels collected in the gasoline survey of July, 1927[9], and the present report is a sequel to the previous study.

Tabular Data

The detailed results of the examination of the motor fuels included in this study are given in Table 1, showing physical and chemical data for samples from different cities. The distribution of the samples according to sulphur content is shown in Table 2.

Discussion of Results

Sulphur—Of the 158 samples collected in the January, 1930, survey, five samples were too small to permit a determination of sulphur content. Of the 153 samples for which results are reported, 140, or 91.5 per cent, had 0.10 per cent of sulphur or less and therefore complied with federal specifications for motor fuel, which permit a maximum sulphur content of 0.10 per cent. In 131 samples, or 85.6 per cent, the sulphur content was 0.08 or less. In only 13 samples, or 8.5 per cent of the total number, the sulphur content was above the limit set by federal specifications. This compares with 5.4 per cent containing over 0.10 per cent sulphur in the survey of July, 1927.

If a refiner is confronted with the necessity of reducing the sulphur in his gasoline in order to meet trade requirements, it is logical to expect that he will reduce the content only to a point that will allow a small margin of safety. For example, if the limit of the tolerance for sulphur in gasoline is 0.10 per cent, the refiner is not likely to reduce below 0.08 per cent. Therefore, it is logical to assume also that refiners who are marketing gasoline with a sulphur content of 0.08 per cent or less did not make any special effort to reduce the sulphur content of their fuel and that the sulphur content of the marketed fuel is the sulphur content which resulted from the normal routine refining of the raw material which the refiner was using. As stated above, 85.6 per cent of the samples analyzed in this survey had 0.08 per cent sulphur or less, and it may be assumed that few, if any, of these motor fuels were treated especially to reduce sulphur. In other words, the reduction of sulphur content was not a problem with the refiners of these fuels. In regard to the nine samples, or 5.9 per cent of the total number, that had 0.09 per cent or 0.10 per cent sulphur, it may be assumed that some of them did require extra treatment to attain their sulphur content; the balance were successfully treated to reduce sulphur content. In other words, between 85.6 per cent and 91.5 per cent of the samples did not constitute a problem in reduction of sulphur content.

The remaining 13 samples, or 8.5 per cent, that had more than 0.10 per cent of sulphur may or may not have been specially treated to reduce sulphur content, but at any rate the treatment was not successful in reducing the sulphur content to the maximum permitted by federal specifications.

Doctor Test—Twenty-eight samples, or 17.7 per cent of the total number, were positive to the doctor test. This number includes four of the five samples for which the sulphur content was not determined and three of the 13 samples which had more than 0.10 per cent of sulphur. In other words, 21 of the 140 samples, or 15 per cent, that had 0.10 per cent of sulphur or less were positive to the doctor test, and 7 of the remaining 18 samples, or 38.8 per cent of those that had more than 0.10 per cent of sulphur, or for which the sulphur content was not determined, were positive to the doctor test. This result indicates a closer correlation between sulphur content and doctor test than was shown by the samples in the survey of July, 1927. However, a study of individual instances corroborates the general conclusion that doctor test and sulphur content do not run parallel. For example, sample 103 from St. Louis was positive to the doctor test and had only 0.01 per cent sulphur, whereas sample 96 from St. Louis, with 0.16 per cent sulphur, and sample 149 from San Francisco with 0.18 per cent sulphur were negative to the doctor test. A number of similar instances can be found throughout Table 1.

Corrosion Test—Only one sample, No. 71 from Chicago, is reported as showing corrosion. This is one of the samples for which sulphur was not determined because of an insufficient quantity of sample. The interpretation of the result of the corrosion test is dependent upon the judgment of the tester, and considerable difference of opinion is frequently encountered in the interpretation of the result. However, the fact that only one of 158 samples was reported as corroding a polished strip of copper when immersed for three hours in the sample at 122° F. speaks well for the motor fuels sampled in this survey.

Color—An interesting disclosure of this survey is that 56 of the 158 samples, or 35.5 per cent, were artificially colored. This tendency on the part of marketers of motor fuels toward making their product distinctive in appearance has been growing during the past several years.

Conclusion

The results of this survey of the sulphur content of typical motor fuels, as in the one conducted in 1927, indicate that representative motor fuels now being sold in the United States contain relatively small proportions of sulphur. As compared with the survey made in July, 1927, a larger proportion of the total number of samples contain more than 0.10 per cent sulphur. However, more than 90 per cent of the samples analyzed had 0.10 per cent sulphur or less, and 72.5 per cent had 0.06 per cent sulphur or less. These motor fuels of low sulphur content are found in every city in which samples were taken and it appears that so long as conditions remain substantially as at present, no difficulty should be experienced in obtaining gasoline under a specification requiring that the sulphur content shall not be more than 0.10 per cent.

IMPORTANCE OF SULPHUR IN PERFORMANCE

During the past several years a great deal of discussion has centered around the question of the permissible limit of sulphur content in fuels for automotive and aviation motors. Under certain conditions of operation, sulphur in motor fuels causes the formation of corrosive substances which attack bearings, wrist pins, and other parts of engines. On the other hand, in making gasoline from certain stocks, the gasoline fraction normally contains a relatively large proportion of sulphur compounds.

By the generally used processes of reducing the sulphur content, a significant part of the gasoline fraction is lost as motor fuel, and added expenses are entailed for chemicals, labor, and other process costs. This condition has been an economic burden to some refiners of high-sulphur crudes. In some instances the treating losses have been rather severe and the treating costs relatively high, but the data presented in this paper indicate that the reduction of sulphur content of motor fuel is a problem to a relatively small number of refiners and of little or no concern to the remainder; in fact, more than 90 per cent of the 153 samples analyzed passed the Federal specification requirement, which limits the sulphur content to 0.10 per cent.

This report is based upon the results of an examination for sulphur content, Doctor test, copper strip corrosion, and color of the samples collected during January, 1930, for the twenty-first semi-annual gasoline survey of the Bureau of Mines. The results of the gravity and distillation tests of the survey were published as Report of Investigations No. 2995[2]. The numbering of the samples given in this report is the same as in Report of Investigations 2995; for example, No. 25 of this report is the same sample as No. 25 of Report of Investigations 2995.

TABLE 1—PHYSICAL AND CHEMICAL DATA FOR SAMPLES OF MOTOR GASOLINE FROM DIFFERENT CITIES
MOTOR GASOLINE SURVEY, JAN., 1930
BOSTON

Sample No.	Color Saybolt	Doctor test	Corrosion test	Sulphur %
1	Colored*	Negative	No	0.06
2	21	Negative	No	0.04
3	25	Negative	No	0.04
4	+25	Negative	No	0.08

(Continued on Page 74)

TABLE 2—SHOWING DISTRIBUTION OF SAMPLES ACCORDING TO SULPHUR CONTENT

City—	Sulphur, per cent: .01	.02	.03	.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15	.16	.18	.27	Not determined	Total
Boston	1	1	2	3	..	3	1	1	..	..	..	..	..	..	..	..	..	..	..	12
New York	2	..	1	2	1	4	1	..	..	..	..	..	..	..	1	..	..	..	..	12
Washington	1	1	..	2	1	4	3	1	3	1	..	..	..	..	..	..	..	..	1	18
Pittsburgh	..	2	..	5	..	2	1	3	2	..	..	1	..	1	..	..	1	..	..	18
Chicago	..	4	2	3	1	..	1	..	..	1	..	1	..	..	..	..	..	..	3	16
New Orleans	1	2	..	1	..	1	..	1	..	..	..	..	1	2	..	..	..	1	..	10
St. Louis	1	3	4	2	2	..	1	1	2	..	..	..	..	..	1	..	..	..	1	18
Bartlesville	2	2	3	3	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	12
Omaha	7	4	1	3	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	18
Denver	3	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6
Laramie	1		1	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6
San Francisco	2	..	3	1	3	..	..	..	..	..	2	..	..	..	..	..	1	..	..	12
Total	21	21	18	28	9	14	12	8	7	2	2	2	1	3	1	1	2	1	5	*153

*Including five samples for which sulphur content was not determined.

[1] Senior refinery engineer, U. S. Bureau of Mines, Petroleum Experiment Station, Bartlesville, Okla., U. S. Bureau of Mines Report of Investigations 3,026.

[2] E. C. Lane, E. L. Garton and O. C. Blade, Twenty-first Semiannual Gasoline Survey, Report of Investigations 2,995, Bureau of Mines, March, 1930, 12 pp.

[3] Diggs, S. H.; Effect of Sulphur in Gasoline on Wrist-Pin Corrosion in Automobiles. Ind. Eng. Chem. Volume 20, January, 1928, Pages 16-17.

[4] Mougey, H. C.; Sulphur in Gasoline from the Automobile Standpoint. Ind. Eng. Chem. Volume 20, January, 1928, Pages 18-21.

[5] Morrell, J. C., and Egloff, Gustav; The Economic Aspects of Desulphurization in Refining Cracked Motor Fuels, Petroleum Development and Technology in 1926, published by the Am. Inst. Min. and Met. Eng., New York. Also in The Oil and Gas Journal, March 17, 1927, Page 150.

[6] Egloff, Gustav, and Lowry, C. D., Jr.; Sulphur Toleration in Gasoline. Ind. Eng. Chem., Volume 20, No. 8, August, 1928, Page 839.

[7] Miller, Walter; Advances in Refinery Technology During 1927. Petroleum Development and Technology in 1927, Pages 393-401, published by Am. Inst. Min. and Met. Eng. Also in The Oil and Gas Journal, March 1, 1928, Page 121.

[8] Ind. Eng. Chem.; Fifty Million Dollars (editorial). Volume 19, No. 2, February, 1927, Page 189. Ind. Eng. Chem.; Shall the Sulphur Tolerance Be Raised? (editorial). Volume 20, No. 8, August, 1928.

[9] Kraemer, A. J., Lane, E. C., and Luce, C. S.; The Sulphur Content of Commercial Motor Fuels. Report of Investigations 2,843, Bureau of Mines, December, 1927. 8 pages.

Reductions in Refinery Crude Runs

Mid-Continent Refiners to Require Approximately 20,000 Bbls. Less Crude Daily in July. Kansas Has Largest Decrease

By C. O. Willson

The Mid-Continent response to a demand for reduced operations to remedy an oversupply situation in refined products, will be a reduction of 18,775 bbls. daily in crude oil runs to stills according to a check of individual operations completed the first of the week. The latest report indicates that the six refining groups (Oklahoma, Kansas, North Louisiana, North and Central Texas, West Texas and Arkansas) will run an average of 553,475 bbls. daily during July. This compares with runs of 572,250 bbls. in June and 565,800 bbls. in July of last year.

A check of the individual operations of refiners as given in the accompanying tables will show that companies have made large reductions in their July operations. These decreases total around 40,000 bbls. daily. However, other refiners have found it necessary to increase their runs so that the total decrease for July is approximately 20,000 bbls. daily. It is possible that additional decreases will materialize before the end of the month. A few operators in making their monthly reports stated that they were starting July on the same basis as June but they would reduce their crude runs to stills later if market conditions did not improve.

Oklahoma

The Mid-Continent Petroleum Corp., operator of the largest refinery in the Mid-Continent Field at West Tulsa, has reduced its runs 20 per cent and expects to continue that schedule through July. This reduction of 4,000 bbls. accounts for most of the 5,725-bbl. reduction in the State.

Changes were made by other Oklahoma companies, several increasing their runs. The White Oak Refining Co. reduced its Allen refinery runs from 6,500 bbls. to 4,000 bbls.

Kansas

Kansas refiners made the largest decreases of any refining group, the crude oil run reductions totaling 11,450 bbls. daily. Derby, Kanotex, National, Peerless, Sinclair, Skelly, Standard of Kansas and White Eagle are the companies whose Kansas plants will run less crude oil than they did in June.

North and Central Texas

The total runs of North and Central Texas are practically the same, although important changes were made in the operations of a few plants. There is plenty of crude oil available in most of the refining groups within this area and in few cases refiners are operating their plants near capacity to get rid of crude oil supplies.

In the Panhandle district a new refinery will be in operation before the end of the month. This plant, located at Kings Mills, will be operated by the Navajo Refining Co., affiliated with the Amarillo Producers & Refiners Corp. and the Del Rio Refining Co.

RUNS TO STILLS AT MID-CONTINENT REFINERIES

1928	
June 1	487,135
July 1	506,310
August 1	543,625
September 1	563,270
October 1	547,820
November 1	550,000
December 1	520,000
1929	
January 1	508,550
February 1	506,800
March 1	514,950
April 1	530,530
May 1	577,500
June 1	585,030
July 1	565,800
August 1	555,250
September 1	552,300
October 1	544,720
November 1	545,473
December 1	540,630
1930	
January 1	535,460
February 1	519,355
March 1	531,500
April 1	555,250
May 1	574,300
June 1	572,250
July 1	553,475

West Texas

The Bluebonnett Oil Refining Co. has resumed operations at its Wickett refinery after a shutdown last month. The Pasotex Petroleum Co. has reduced the runs of its El Paso refinery from 10,800 bbls. to 9,000 bbls. daily.

North Louisiana and Arkansas

There has been a general curtailment in Arkansas and North Louisiana due to acute market conditions. North Louisiana would have shown a reduction in total runs had it not been for the fact that The Texas Company has resumed operations at its Ardis refinery on a basis of 5,000 bbls. daily. This refinery, which was previously operated as a topping plant, was shut down for 60 days while improvements were being completed. It now has the necessary equipment for the production of finished light end products.

In Arkansas, the Lion, Root and Cross companies reduced crude runs. The Houston Oil Co. increased crude runs 1,500 bbls. At Norphlet, in the Smackover area, the Macmillan Petroleum Products Co., has started the construction of a new plant. The present refinery at El Dorado will be combined with the new plant when completed.

MID-CONTINENT REFINERY OPERATIONS

Districts—	No. of plants July 1	Daily crude cap. (bbls.)	Daily crack. cap. (bbls.)	Plants oper. July 1	Runs to stills July 1	Plants oper. June 1	Runs to stills June 1	Daily dec. July 1
Arkansas	9	45,300	16,750	9	26,100	9	29,750	3,650
Kansas	15	140,500	77,400	15	89,250	15	100,700	11,450
North Louisiana	6	58,750	21,000	5	34,200	4	30,100	*4,100
Oklahoma	46	317,300	117,050	41	211,325	41	217,050	5,725
North and Central Texas	38	179,900	34,750	36	112,150	35	113,450	1,300
West Texas	31	150,800	44,700	27	80,450	26	81,200	750
Total	145	892,550	311,650	133	553,475	130	572,250	18,775

*Increase.

REFINERY OPERATIONS IN ARKANSAS
(Plants which have been in operation during the past year)

	Daily capacity	Runs July 1	Runs June 1
James H. Berry & Sons, Waterloo	2,000	1,200	1,000
Henry H. Cross Co., Smackover	6,000	4,000	5,000
Houston Oil Co., Camden	3,500	3,500	2,000
Kettle Creek Refining Co., Pearson	5,000	1,600	1,600
Lion Oil & Refining Co., El Dorado	12,000	5,500	6,500
Macmillan Petroleum Products Co., El Dorado	1,800	1,550	1,550
Ouachita Valley Refining Co., El Dorado	2,000	750	1,000
Root Refining Co., El Dorado	10,000	6,000	8,600
Simms Oil Co., Smackover	3,000	2,000	2,500
Total	45,300	26,100	33,700

REFINERY OPERATIONS IN OKLAHOMA
(Plants which have been in operation during the past year)

	Daily capacity	Runs July 1	Runs June 1
Anderson-Prichard Oil Co., Cyril	5,000	4,500	4,500
Barnsdall Refineries, Inc., Barnsdall	6,000	3,800	4,000
Barnsdall Refineries, Inc., Okmulgee	10,000	4,000	2,000
Bell Oil & Gas Co., Grandfield	4,500	1,600	2,000
Champlin Refining Co., Enid	16,000	12,000	11,000
Citizens Refining Co., Seminole	1,000	(*)	(*)
Continental Oil Co., Sapulpa	10,000	7,000	1,500
Continental Oil Co., Ponca City	30,000	19,000	18,000
Cushing Refining & Gasoline Co., Blackwell	1,800	1,500	1,500
Cushing Refining & Gasoline Co., Cushing	3,500	3,000	3,000
Deeprock Oil Corp. (Shaffer), Cushing	10,000	10,000	10,000
Eason Oil Co., Enid	5,000	3,500	3,000
Electrol Refining Co., Oklahoma City	3,000	(*)	(*)
Empire Oil & Refining Co., Cushing	5,000	4,200	4,200
Empire Oil & Refining Co., Okmulgee	4,000	4,000	4,000
Empire Oil & Refining Co., Ponca City	8,000	8,000	8,000
Garber Refineries, Inc., and Omar Refining Co., Garber	3,500	2,700	2,800
Globe Oil & Refining Co., Blackwell	7,500	6,000	7,000
Globe Oil & Refining Co., Cushing	15,000	6,000	11,500
Homaokla Oil Co., Allen	3,000	2,300	2,000
Illinois Oil Co., Cushing	3,000	(*)	(*)
Imperial Refining Co., Ardmore	5,000	3,000	2,800
Independent Oil & Gas Co., Okmulgee	5,000	3,300	3,300
Johnson Oil Refining Co., Cleveland	6,000	5,000	5,000
Mid-Continent Petroleum Corp., West Tulsa	40,000	18,000	22,000
Northwestern Refining Co., Tonkawa	3,000	(*)	(*)
Peppers Gasoline Co., Covington	1,000	725	750
Pierce Oil Corp., Sand Springs	8,000	5,000	7,000
Producers Oil Co., Bristow	2,500	1,500	1,500
Producers & Refiners Corp., West Tulsa	6,000	4,200	5,000
Pure Oil Co., Ardmore	5,000	2,000	2,000
Pure Oil Co., Muskogee	9,000	8,000	8,000
Remington Oil Co., Wewoka	2,000	(*)	(*)
Rock Island Refining Co., Beckett	3,500	3,500	3,000
Sinclair Refining Co., Muskogee	1,000	800	800
Sun Oil Co., Yale	5,000	5,000	4,800
The Texas Company, West Tulsa	15,000	15,000	15,000
Texas Pacific Coal & Oil Co., Wynnewood	2,500	1,800	2,000
Tidal Refining Co., Drumright	15,000	12,000	12,000
Transcontinental Oil Co., Boynton	2,500	2,000	2,000
Transcontinental Oil Co., Bristow	5,000	3,500	4,500
Western Oil Corp., Beckett	2,000	1,500	1,500
White Oak Refining Co., Allen	8,000	4,000	6,500
Wilcox Oil & Gas Co., Bristow	5,000	4,000	3,800
Wirt Franklin Petroleum Corp., Ardmore	4,000	3,400	2,800
Yale Oil Corp., Yale	1,500	1,000	1,000
Total	317,300	211,325	217,050

*Shut down.

REFINERY OPERATIONS IN NORTH CENTRAL TEXAS
(Plants which have been in operation during the past year)

	Daily capacity	Runs July 1	Runs June 1
American Refining Properties, Wichita Falls	6,000	3,000	3,400
Archer Refining Co., Megargel	2,000	500	700
Central Texas Refining Co., Angus	4,000	1,200	1,500
Central Texas Refining Co., Minerva	2,000	500	600
Continental Oil Co., Wichita Falls	6,000	3,300	3,000
Dale Oil & Refining Co., Electra	4,000	3,400	3,500
Empire Oil & Refining Co., Gainesville	5,000	3,600	3,600
Falls Refining Co., Wichita Falls	2,000	1,000	1,500
Gulf Refining Co., Fort Worth	10,000	6,000	6,000
Humble Oil & Refining Co., Breckenridge	2,000	1,300	1,200
Humble Oil & Refining Co., Chilton	4,000	1,650	2,500
Humble Oil & Refining Co., Neches	5,000	2,000	1,000
Iowa Park Producing & Refining Co., Iowa Park	2,500	1,200	1,250
LaSalle Petroleum Co., Burkburnett (Noble)	3,500	1,000	1,200
Macmillan Petroleum Co., Isom	8,000	6,000	6,000
Magnolia Petroleum Co., Fort Worth	12,000	5,000	5,000
Magnolia Petroleum Co. (White Eagle plant), Fort Worth	6,000	2,500	2,500
Magnolia Petroleum Co., Corsicana	5,000	5,000	5,000
Olney Oil & Refining Co., Olney	2,500	1,600	2,100
Oriental Oil Co., Dallas	5,000	3,300	2,700
Orient Petroleum Co., Wichita Falls	2,500	850	1,000
Panhandle Refining Co., Wichita Falls	5,000	3,300	3,800
Pampa Refining Co., Pampa (Wilcox Oil & Gas Co.)	4,000	3,000	3,000
Petroleum Refractionating Co., Pampa†	5,000	3,000	3,400
Phillips Petroleum Co., Isom	15,000	11,000	11,000
Primrose Refining Co., Wichita Falls	2,500	1,800	2,200
Simms Oil Co., Dallas	5,000	2,850	3,000
Star Refining & Producing Co., Fort Worth	1,800	500	500
Superior Refining Co., Tiffin	2,000	(*)	(*)
Tarrant Refining Co., Grand Prairie	2,500	(*)	(*)
Taxman Refining Co., Wichita Falls	2,500	2,200	2,200
The Texas Company, Dallas	16,000	16,000	16,000
The Texas Company, Amarillo	4,000	3,500	3,500
Tidal Western Refining Co., Burkburnett	3,000	2,000	2,000
Texas Pacific Coal & Oil Co., Fort Worth	3,000	1,800	1,800
Texas Pacific Coal & Oil Co., Caddo	1,200	800	1,000
Transcontinental Oil Co., Fort Worth	5,000	4,000	4,000
Waggoner Refining Co., Electra	3,400	2,500	2,000
Total	179,900	112,150	113,450

*Shut down. †Temporarily shut down first 10 days of month.

REFINERY OPERATIONS IN KANSAS
(Plants which have been in operation during the past year)

	Daily capacity	Runs July 1	Runs June 1
Barnsdall Refineries, Inc., Wichita	4,000	2,000	1,800
Derby Oil Co., Wichita	6,000	4,750	6,000
Eldorado Refining Co., Eldorado	3,500	3,000	3,000
Golden Rule Refining Co., Wichita	1,500	1,000	1,000
Kanotex Refining Co., Arkansas City	10,000	2,000	2,500
Independent Oil & Gas Co., Kansas City	6,000	5,000	5,000
National Refining Co., Coffeyville	6,500	4,500	5,000
Peerless Oil Refining Co., Chanute	3,000	1,800	2,000
Shell Petroleum Corp., Arkansas City	22,000	17,000	17,000
Sinclair Refining Co., Coffeyville	12,000	8,500	11,000
Sinclair Refining Co., Argentine	9,500	5,000	8,000
Skelly Oil Co., Eldorado	23,000	13,400	15,200
Standard Oil Co. of Kansas, Neodesha	20,000	10,000	11,000
Vickers Petroleum Co., Potwin	3,500	2,300	2,100
White Eagle Oil Corp., Augusta	10,000	9,000	10,000
Total	140,500	89,250	101,900

(Continued on Pafe 150)

Drilling Fluid Difficulties at Hobbs

Most Troublesome Condition Is the Gas and Oil Cutting Heavy Mud Used as a Precaution in Drilling Through the Big Gas

By C. P. Parsons

Briefly, the present rotary drilling procedure and special use of mud in the north end of the Hobbs Field is as follows:

From the surface to 100-200 feet, logs show sands, gyp and shells. Some operators are purchasing cheap commercial clays to mix mud for starting the hole.

Surface casing is set at about 200 feet.

From 200 to 1,500 feet natural mud is made in the hole when drilling through layers of red beds.

From 1,500 to 2,700-2,900 feet, the hole goes through considerable anhydrite and salt. If additional mud is needed to penetrate the formations, commercial clays are used.

Nine-inch casing is set at about 2,700 to 2,900 feet.

Oil and gas sands are found between 2,700 and 3,000 feet, and they cut up the mud considerably. Some operators are drilling through these sands with water, figuring that the oil and gas goes up through the water and does no harm. If it blows out they only lose the water and figure that they can easily kill the gas again and proceed. Other operators are mixing baroid with the mud to drill through these sands.

The "big gas" is found around 3,100 feet and it is the abnormally high pressure of this gas that causes real concern about the drilling mud at Hobbs. A very heavy mud is required to drill through this gas to reach the casing point for the production string just above the main oil sand at around 4,100 feet. Many tons of baroid are mixed with mud to keep this gas under control, and in several cases even this heavy mud has blown out of the hole due to becoming gas and oil cut.

Gas and Oil Cuttings

Hence, the most troublesome mud conditions at Hobbs is the gas and oil cutting the heavy mud used as a necessary precaution for drilling through the big gas. This gas is said to have a pressure of 1,700 pounds per square inch. A normal pressure of gas at this level would be about 1,200 pounds, and an ordinary drilling fluid, weighing about 10 pounds per gallon, could be used successfully against this normal pressure. As it is, operators at Hobbs are now using a 14 or 15-pound mud to drill through the big gas. Some operators are just adding sufficient baroid to their mud to obtain their desired weight, while other operators are using a straight baroid and water fluid.

When baroid is mixed with mud fluid already containing a high percentage of solids in order to get a 14 or 15-pound fluid, the result is a thick, heavy mud,

Cooling tower to treat gas cut mud in Hobbs, N. Mex., field.

which is difficult to handle and becomes gas and oil cut very easily. Consequently, much of the effect of additional weight is spoiled and it is very liable to blow out.

For the pressures reported at Hobbs, a thin, heavy mud of 12 or 13 pounds per gallon should be sufficiently heavy. To most economically and effectively obtain such a fluid it is necessary to make a mixture containing the greatest percentage of water and the lowest percentage of solids, the solids having the highest obtainable specific gravity and yet have other desirable qualities, such as sufficient colloidal quality and minimum abrasiveness. Also this colloidal quality should be of a slick nature, rather than sticky, so that gas bubbles and drops of oil can more easily become liberated instead of becoming entrapped and cutting the mud.

Lessening of Weight

One of the most striking things noticed at Hobbs was that a heavy mud, weighing 14 pounds per gallon, was mixed and put into a well through the drill stem to kill the gas that had blown out from just below 3,100 feet, and then when the mud was circulated to the surface its weight was reduced to less than 6 pounds per gallon. This lessening in weight was apparently due only to gas cutting, but on close examination there also was considerable cutting by oil. On separating a sam-

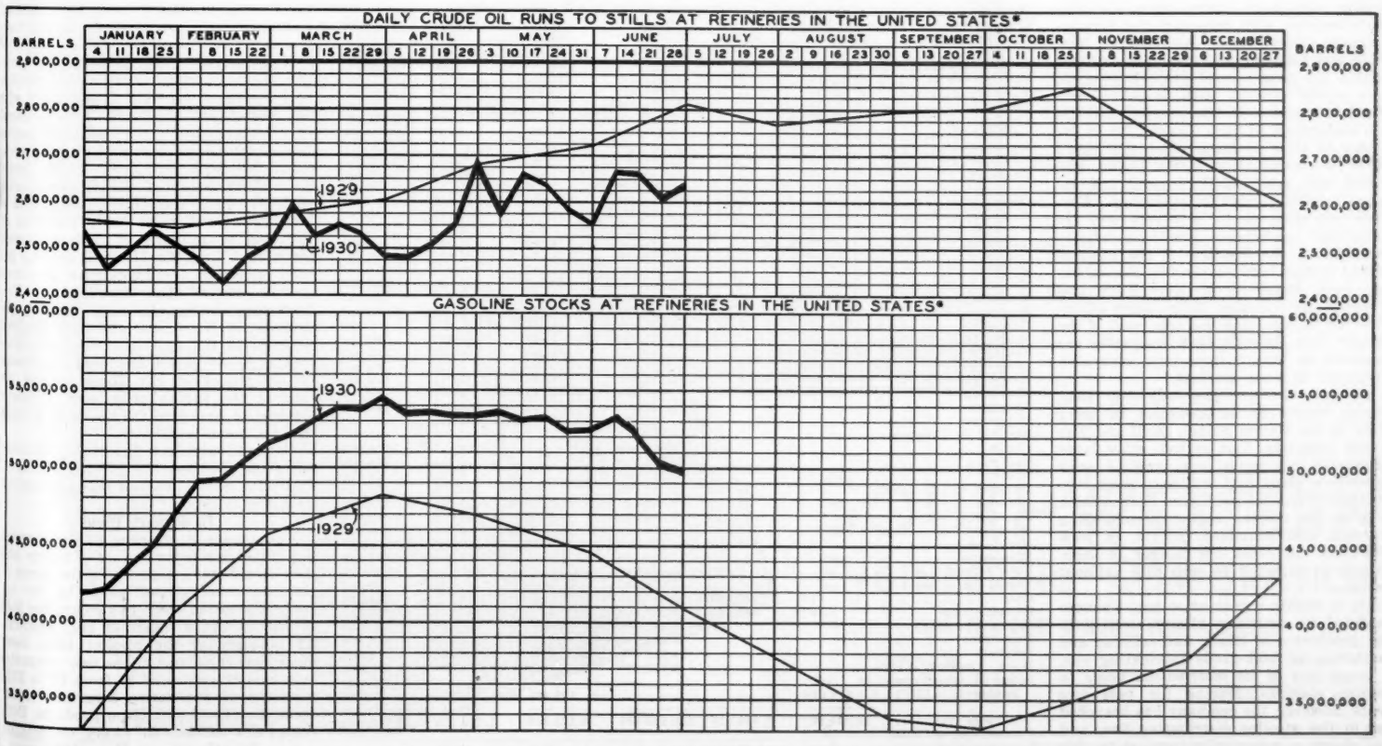
(Continued on Page 150)

AMERICAN PETROLEUM INSTITUTE WEEKLY REFINERY STATISTICS

The weekly report made to the American Petroleum Institute on refinery statistics—crude runs to stills, gasoline stocks and gas and fuel oil stocks in barrels—for the week ending July 5.

	Week ending July 5				Week ending June 28				Week ending January 4			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	467,900	8,124,000	9,210,000	100.0	497,400	8,163,000	9,208,000	100.0	454,857	5,998,000	7,431,000
Appalachian	91.8	70,400	1,632,000	935,000	91.0	78,000	1,638,000	882,000	91.6	75,571	1,282,000	805,000
Indiana, Illinois, Kentucky	99.6	290,900	7,864,000	4,112,000	99.6	320,700	8,067,000	4,190,000	98.6	289,800	5,483,000	3,505,000
Oklahoma, Kansas, Missouri	89.9	281,700	4,497,000	4,760,000	89.9	295,300	4,609,000	4,715,000	87.7	263,428	3,604,000	3,277,000
Texas	90.4	559,800	6,843,000	10,516,000	90.4	607,900	6,802,000	10,444,000	90.7	539,857	6,590,000	13,757,000
Louisiana and Arkansas	96.8	166,900	2,320,000	1,883,000	96.8	170,000	2,467,000	1,929,000	96.8	160,000	2,161,000	4,499,000
Rocky Mountain	93.6	57,400	2,678,000	1,187,000	93.6	65,700	2,704,000	1,196,000	93.3	41,614	2,273,000	973,000
California	99.3	583,300	15,076,000	106,535,000	99.3	592,400	15,250,000	106,873,000	99.3	642,857	14,826,000	109,770,000
Total United States	95.7	2,478,300	49,034,000	139,138,000	95.7	2,627,400	49,700,000	139,437,000	95.4	2,468,285	42,217,000	144,017,000
Texas Gulf Coast	100.0	419,100	5,656,000	7,516,000	100.0	452,600	5,606,000	7,466,000	100.0	429,585	5,579,000	10,792,000
Louisiana Gulf Coast	100.0	117,100	1,936,000	1,049,000	100.0	114,900	2,066,000	1,135,000	100.0	108,514	1,877,000	3,818,000

(1) Per cent of refinery capacity represented. (2) Daily crude runs to stills. (3) Gasoline stocks. (4) Gas and fuel oil stocks.



Data for 1930 based on weekly reports of the American Petroleum Institute. Data for 1929 derived from monthly reports of the Bureau of Mines, Department of Commerce. Figures for last week not shown in graph but are included in above tables.

Hearing on Socony-Vacuum Merger

Changed Conditions in the Industry Stated to Have Removed Objections to Consummation of the Plan

By A. E. Mockler

New York Bureau, The Oil and Gas Journal

NEW YORK, July 8.—Changed competitive conditions within the oil industry have brought about a situation where consolidation of Standard Oil Co. of New York and Vacuum Oil Co. cannot by any stretch of the imagination be construed as creation of a monopoly, or an act in restraint of trade, attorneys for the two companies are emphasizing in the presentation of their testimony in the hearings in federal court here on the government suit to prevent the merger. The hearings are being conducted by Fred L. Williams, appointed special master by the United States court for the Eastern district of Missouri for the purpose of taking testimony in the case. John L. O'Brian, assistant to the attorney general, is handling the case for the Government, while testimony for Standard Oil Co. of New York and Vacuum Oil Co. is being handled by G. H. Dorr of the legal firm of Hines, Rearick, Dorr, Travis & Marshall.

In opening the government's case, Mr. O'Brian stated that while for convenience the litigation instituted in 1906 and terminating with the dissolution decree in 1911 would be referred to in testimony as "the old case," there was actually no separation between it and the present litigation. The Government, he said, will endeavor to restrain the companies from carrying out their proposed merger on the ground that such a consolidation will be in violation of the decree which terminated the earlier litigation, and would eliminate all present and potential competition between these two companies. Taking of testimony in the New York hearings will occupy several weeks, but must be terminated by September 10, when arguments in the case will be held in St. Louis early in October. A number of executives of both companies will take the stand in the hearings here.

Expansion Program Involved

According to reports current in market circles, an impressive expansion program, taking in both domestic and export marketing operations, hinges upon the ultimate decision with respect to the Socony-Vacuum consolidated. Standard of New York and Vacuum, which at various times within the past several years have come into sharp conflict with Royal Dutch-Shell in various of the world's markets, are understood to have planned for an increase in their business which will carry them into every state in the Union, and which will substantially expand and enlarge foreign marketing operations. Foreign expansion plans, it is reported, are being held in abeyance pending a definite decision on the legality of the contemplated merger between the two companies, but both Standard of New York and Vacuum are widening their sphere of operations in American markets, and, if the merger falls through, both companies are expected to launch important expansion programs in home markets.

At present there are only two companies known to be operating in every state in the United States, Shell and The Texas Company. One or two other large integrated companies are credited with expansion plans that will take them into all states. General Petroleum Corp., which will be the holding company controlling Vacuum and Standard Oil Co. of New York, in the event the merger is sanctioned, is expected to join this national group.

Up to within a year or so ago, Vacuum confined its activities almost entirely to the production of crude, and refining and marketing of high-grade lubricating oils, a large part of its distribution being in foreign markets. During the past two years, however, the company has branched out in the gasoline distributing line, and has shown a noteworthy increase in this type of business during the past year. Vacuum's entire gasoline gallonage, however, is not such that the company may be classified as a direct competitor of Standard Oil Co. of New York, or any other similar large company, for that matter, from the standpoint of gasoline sales alone.

Marketing Situation

Standard Oil Co. of New York has done a very heavy export business, but in addition has been one of the leading domestic marketers of refined products. While the New York company, through subsidiaries, is marketing gasoline and other refined products in a number of sections of the United States, the parent company continues to confine its activities to New York and the New England states. Up to within a few years ago, "Socony" was the acknowledged dominant factor in this area, and the steadily increasing gasoline consumption in this area accounted for healthy gains in sales totals from year to year. Within the past few years, however, there has been a definite elimination of old territorial laws, and Socony is no longer "ruler of the roost" in its home field. Among the prominent companies which are affording stiff competition for Socony in its home field are such factors as Beacon Oil Co. (Standard Oil Co. of New Jersey), Shell, Richfield, Cities Service, Gulf, The Texas Company, Tide Water-Associated, Sun, Atlantic Refining, Pan American and others. The eastern area included in Standard of New York's nominal territory formerly received only eastern-made gasoline and occasional shipments from the Gulf and from Mexico. Now, however, it receives all of these gasolines, and, in addition, is getting motor fuel from California and South America.

At the time of the dissolution of the old Standard Oil organization in 1911, the New York company was credited with handling 85 per cent or more of the total refined products gallonage in New York and New England. Standard of New York held this leadership, although by steadily diminishing percentages, until about 1926, in which year the New York company handled but approximately 46 per cent of the gallonage in gasoline. Its proportion of the total gallonage of what is still known in the trade as "Standard Oil Co. of New York territory" fell off to only about 23 per cent in 1929, and is expected to show a further decline this year, due to intensified competition in its home field from other large companies.

Going Farther Afield

This falling-off in leadership in its home field has been evident for some years, and officials of the New York company have been planning to carry the company's operations farther afield in order to provide for a normal growth in gallonage. This has necessitated the acquisition of outside marketing facilities, and, more particularly, additional refining facilities. When the New York company was segregated from the parent Standard Oil Co. by the dissolution decree in 1911, it was essentially a marketing organization, dependent upon outside sources of supply for necessary stocks of gasoline and other refined products. The New York company naturally turned to Standard Oil Co. of New Jersey for these supplies and was for many years the principal customer of the New Jersey company, which supplied it with gasoline, kerosene, lub oils, and other products for its home trade. Standard of New York's export volume, centering largely in the Orient and Far East, was supplied by purchases made principally from Standard Oil Co. of California, although the New York company frequently bought from other companies or in the open market.

Acquisition of the Magnolia Petroleum Co., operating in Texas and the Mid-Continent areas, the General Petroleum Corp. in California, and more lately the White Eagle Oil & Refining Co. in the Mid-Continent, has placed the New York company in position to supply a good part of its own requirements, in addition to widening its sphere of domestic operations through subsidiaries ideally situated to form part of the nucleus for a national marketing organization, as is contemplated by the Vacuum-Socony group. Standard of New York at numerous times during the past few years has been credited with plans for erecting a large and modern refinery at Sparkhill, N. Y., where the company owns a large tract of land suitable for such a plant, but thus far nothing tangible has transpired in that connection.

Russian Oil

Standard of New York at several times within the past few years engaged in sharp "price wars" with Royal Dutch-Shell in foreign markets, principally in the Far East, where Socony has marketed considerable quantities of Russian refined products, Vacuum has also marketed large quantities of Russian oil products abroad. Both companies, through the placing of substantial contracts with the Soviet oil syndicate, have widened their influence in export markets, coming into direct competition with Royal Dutch-Shell in most instances. Shell fought Socony's invasion of the Indian market with Russian kerosene bitterly, and a long drawn-out price war, resulting in the loss of millions of dollars ensued. Since that time Sir Henri Deterding has been generally credited with a strong animus toward the Standard of New York organization. In some quarters, the invasion of New York and New England markets by the American Shell organization is looked upon as direct fulfillment of the threat of Sir Henri during the heat of the Indian price war to "carry the war to Standard Oil Co. of New York into its home markets."

Vacuum, although marketing Russian oils from time to time in direct competition with Shell, has had no open conflict with the latter.

In Export Field

Importance is attached to the reported foreign expansion plans of Vacuum and the New York company, in the event of their eventual consolidation by the important position these two companies hold in the export division of the American oil industry at the present time. Combined export volume of the two companies is variously estimated at from 10 to 12½ per cent of the entire American export trade in refined petroleum products. Both companies market in direct competition

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MARKETING ACTIVITIES OF THE TWO COMPANIES

Detailed data on the marketing activities of Standard Oil Co. of New York and Vacuum Oil Co. were presented by statisticians for the two companies, who introduced in evidence in the Federal Court hearing here a table showing sales of gasoline and lubricants by both companies, by states, during 1929, together with the relationship of such sales to the total consumption of the country as a whole and the individual states in which the two companies operate. The table follows:

Barrels

State—	Gasoline: Socony	Gasoline: Vacuum	Gasoline: Total consumption	Lubricants: Socony	Lubricants: Vacuum	Lubricants: Total consumption
New York	9,880,978	538,701	29,296,000	527,478	172,013	2,161,000
Connecticut	1,557,934	.....	4,721,000	56,944	13,525	362,000
Massachusetts	3,583,758	6,939	10,672,000	156,363	79,498	855,000
Vermont	350,138	166	963,000	10,065	4,238	56,000
New Hampshire	478,871	.....	1,351,000	14,383	5,588	98,000
Rhode Island	477,372	.....	1,732,000	15,383	4,673	149,000
Maine	777,830	.....	2,096,000	19,901	15,759	143,000
Texas	2,693,560	.....	16,615,000	95,633	31,898	734,000
Oklahoma	621,898	.....	6,890,000	20,146	14,862	289,000
Arkansas	407,861	.....	2,926,000	17,895	4,632	134,000
Louisiana	120,311	.....	3,847,000	2,286	13,121	213,000
New Mexico	109,205	.....	1,048,000	3,965	2,570	42,000
California	1,471,473	.....	27,192,000	19,805	37,988	1,270,000
Oregon	329,878	.....	3,528,000	7,178	10,330	179,000
Washington	535,116	.....	5,526,000	14,451	17,997	292,000
Arizona	82,712	.....	1,391,000	1,748	5,347	65,000
Nevada	13,687	.....	384,000	424	2,452	17,000
Colorado	102,201	.....	3,381,000	4,949	8,919	164,000
Iowa	46,548	16,032	7,345,000	1,175	27,880	350,000
Kansas	711,706	.....	7,788,000	27,781	19,673	348,000
Maine	327,532	9,491	7,869,000	12,147	25,003	388,000
Mississippi	90,547	465,335	8,524,000	3,942	32,396	484,000
Montana	86,042	.....	1,635,000	1,107	8,857	78,000
Nebraska	174,794	.....	4,672,000	10,058	13,660	203,000
North Dakota	169,601	.....	2,717,000	2,747	14,722	102,000
South Dakota	367,744	.....	2,693,000	11,898	4,066	103,000
Utah	1,874	.....	1,214,000	62	2,425	60,000
Wisconsin	96,650	.....	8,794,000	3,694	39,704	545,000
Wyoming	60,041	.....	748,000	1,749	3,498	35,000
Alabama	.....	.....	4,017,000	.....	14,817	238,000
Delaware	.....	.....	673,000	.....	2,222	40,000
District of Columbia	.....	.....	1,570,000	.....	3,599	66,000
Florida	.....	.....	4,868,000	.....	14,136	225,000
Georgia	.....	.....	4,776,000	.....	19,723	252,000
Idaho	.....	.....	1,194,000	.....	4,607	54,000
Illinois	.....	38,510	17,981,000	.....	89,477	1,359,000
Indiana	.....	48,824	9,452,000	.....	32,435	634,000
Kentucky	.....	.....	3,384,000	.....	17,060	186,000
Maryland	.....	.....	3,510,000	.....	9,305	264,000
Michigan	.....	153,061	17,193,000	.....	67,742	1,126,000
Mississippi	.....	.....	3,018,000	.....	9,254	140,000
New Jersey	.....	7,671	10,846,000	.....	47,204	770,000
North Carolina	.....	.....	5,696,000	.....	12,599	364,000
Ohio	817	229,135	20,881,000	.....	74,741	1,494,000
Pennsylvania	5,887	848,455	19,229,000	.....	206,454	1,740,000
South Carolina	.....	.....	2,592,000	.....	4,329	156,000
Tennessee	.....	.....	4,259,000	.....	16,742	240,000
Virginia	.....	.....	4,547,000	.....	10,390	269,000
West Virginia	.....	.....	2,742,000	.....	8,604	208,000
Sales to other companies	315,616	.....	.....	156,407	.....	.....
Total	26,050,002	2,498,025	320,484,000	1,221,956	1,302,732	19,743,000
Percentage of total consumption	8.1%	0.8%	.....	6.2%	6.6%	.....

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ON THE RIGHT ROAD

The curtailment movement has reached its final stage.

First it was necessary to reduce crude production in line with refinery demand.

Next it was necessary to reduce runs to stills in line with consumption.

Now it is necessary to reduce crude production in line with that reduction in runs to stills.

When that is done production of crude oil and refined products will be in balance with demand and the long-sought stabilization of the market will be in sight.

After that it will be simply a question of maintaining that ratio of production of crude and refined products to the fluctuations in demand.

Any evasion of that ratio, any increase in the production of crude or refined products above the current demand will bring a return of the unsettled conditions and depressed markets that have become too familiar.

Meanwhile there is, naturally enough, more or less grumbling at conditions. The necessary readjustment will bear hardly upon those who have not foreseen the inevitableness of this readjustment if the industry was to get back on its feet.

But the alternative is worse. Continued overproduction, of crude or of refined products, is bound to break the market and postpone improvement.

The development was not unexpected. There has been abundant warning for several months that what has happened would happen unless proper efforts were made to avert it.

Curtailment of crude production was not sufficient, largely because the curtailment did not cut deep enough. The manufacturing division, apparently thinking the curtailment of crude was all that was necessary, made the mistake last year of vastly overproducing motor fuel, and failed to make sufficient allowance for that surplus in its operations early this year.

The efforts made in April and May to remedy this situation were not general enough to be of much effect, but the condition of the market at the opening of July compelled drastic action.

As a consequence of this decision to reduce runs the former figures for refinery demand for crude had to be correspondingly cut. The producer who has been trying to keep his output in line with refinery demand found himself faced with the necessity for a further reduction and some no doubt think themselves hardly used, but there is no help for it while there is the consolation that the industry is at last getting on a sound basis and is actually taking the final essential step towards permanent improvement.

Producing more crude than the refineries could take, making more motor fuel than the market could absorb, was bound to crash sooner or later. So long as either continued the industry was simply giving away its products and pushing down its market further and further.

Overproduction was impoverishing the industry and not benefiting the consumer. The legitimate returns on the cost of production and manufacturing were sacrificed in the effort to dispose of an otherwise unsalable surplus.

Had there been no overproduction the extra expense involved in trying to dispose of that surplus would have been saved to the producers and manufacturers and given them a reasonable return on their investment.

Neither crude producers nor refiners can expect to make what they should out of their operations until that situation is corrected. When it is corrected both producers and refiners will realize the benefits of stabilized operations and the entire industry will be better off than it has ever been.

As a preliminary to attaining that condition the recommendations of the directors of the American Petroleum Institute for an immediate survey of necessary "working stocks" is a most practical beginning.

Compilation of working stocks for each refining company will give a definite figure for the minimum quantity of gasoline working stocks required to maintain operations in the industry. Wth that figure definitely established in relation to known requirements there will be something to shoot at but not over.

It will be plain notice to every unit in the industry that overstepping that line will be inviting disaster.

It must be kept constantly in mind that it is not alone gasoline overproduction that is at fault. Other refined products are also greatly overstocked as witness the condition of the kerosene, fuel oil and lubricating oil markets.

Production in the manufacturing division must make a better effort to balance output with demand for other products also.

The industry is too prone to have a one-track mind. Crude producers have been too engrossed in getting out the oil. Manufacturers have been concentrating on motor fuel. What the industry needs is a broad and inclusive view of the whole operations of the industry with a definite program for the most profitable disposal of every product.

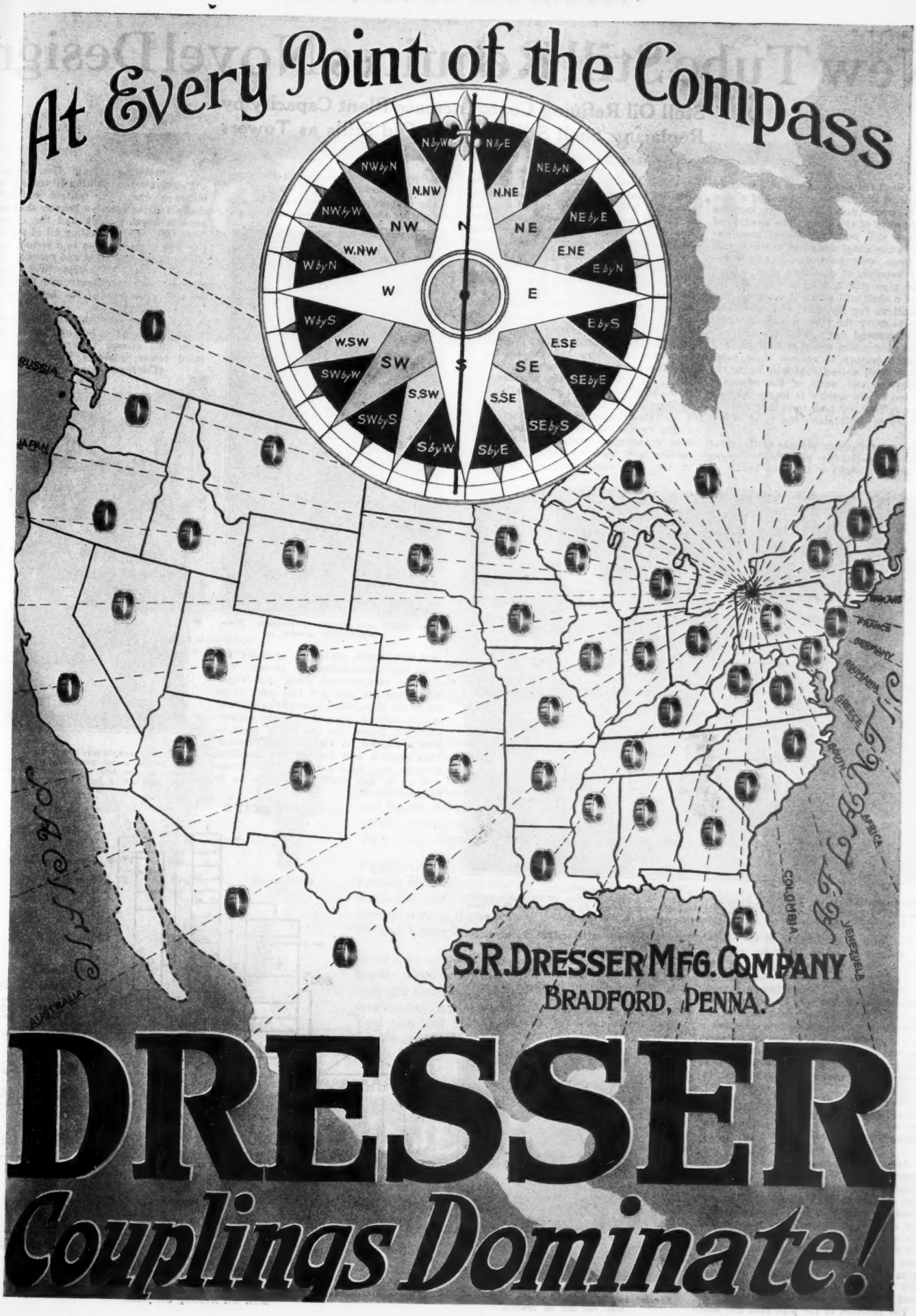
Such an outlook shared throughout the industry would have avoided the competition of fuel oil at cheap coal prices and other economic wastes in disposal. It would, beside, long ago, have led to a much more systematic manufacturing program which would have impressed upon producers the lessening need for crude.

There is no industry with more favorable conditions for stabilized operations than the oil industry, with its unbroken record of increasing demand for its products year after year. That is one certain factor that can be used as a basis for all operations. All that is needed is good common sense, keeping one's feet on the ground, and refusing to imagine larger increases than experience has shown to be likely.

There is little likelihood of a year without an increase in demand; the normal growth of the country assures that. If the increase should be larger than usual there is ample manufacturing capacity to meet it as it develops and it will be more profitable to take care of it that way than to overproduce and ruin the market as has been done so often.

The reduction in crude runs to stills with the resultant further reduction in crude production may be a bitter dose but it is absolutely necessary if the industry is to recover. It will be a lot quicker and better than letting the disease run its course, which would be much longer and without any assurance of getting well.

With curtailment carried out to its utmost there can be no question of the result, a broader and steadier prosperity than the industry has ever known. The industry is at last on the right road.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New Tube Still Requires Novel Design

Stoll Oil Refining Co. to Increase Plant Capacity by Replacing Shell Still. Utilize Old Stills as Towers

By W. T. Ziegenhain

The Stoll Oil Refining Co. was recently faced with the problem of building a pipe still between two shell stills to increase the capacity of the plant. The location of the new still required several modifications in the usual design of the new still and these were economically and effectively handled, as described here.

The pipe still had to be built on the site of a shell still which it replaced. The foundations for the shell still were adequate to carry the load, but the problem of underground draft chambers and sufficient combustion space at first made it appear necessary to remove these foundations. This necessitated reinforcing the foundations and walls of the adjoining stills, so it was decided to locate the tube banks sufficiently high to permit the flue ducts to be built above the level of the ground.

The accompanying picture of the front of the new still under construction shows the unusual height of the tube banks.

sioned a general revamping of the distillation equipment. The entire skimming operation will be carried out in a series of towers now being erected, while two sets of two small stills operating semi-continuously will reduce the topped crude to 14 gravity fuel oil and produce a pressable wax distillate.

The shell still which was replaced serves as an evaporator and the plan of the new operation includes taking overhead all of the normal gasoline cut, kerosene and gas oil, and fractionating these in a series of towers as the overhead from the evaporator and the residue in the evaporator will be reduced in the shell stills. By referring to the accompanying flow chart the method of operation may be more easily described.

Description of Flow Chart

The crude will enter the unit through heat exchangers arranged in series receiving heat from the vapors coming off of the four shell stills. It will then

New pipe still at the Stoll Oil Refining Co. plant in Louisville, Ky., being built within a limited space. The elevation of the tube banks permits the flu duct to be laid over ground. The stack will rest on the extension shown in the left half of the picture.

The other novel feature of the still is the manner in which the tubes are supported. Four 12-inch I beams are used as corner posts and these are tied together in pairs by two 12-inch I beams running lengthwise with the still. Heavy calorized, specially built cross members rest on these supports and these cross members in turn support specially cast tube sheet sections suspended from the cross members on heavy bolts. The tube sheet is in sections and these are also bolted together.

The manner of supporting the roof tubes and the perforated tube sheet for the wall bank may be seen in the accompanying picture.

Increase Plant Capacity

After completing the new pipe still the capacity of the plant is expected to be increased approximately 1,000 bbls. daily. The company now receives crude into the plant by tank cars from the local fields but expects to augment the present supply with crude shipped in by tanker from the newly developed Owensboro Field. A pipe line is being laid to the Ohio River from the refinery in Louisville and crude will be received through it within the next 30 days.

The addition of the pipe still has occa-

enter the pipe still and is expected to be preheated to 300° F. as it enters. The oil will pass up through the wall bank of tubes and then through the roof tubes and will be flashed in the 8'x23' evaporator at about 800° F. This is sufficiently high to distill off all of the gasoline, kerosene and the light gas oil and

Special casting as part of the bubble cap tray for use in towers.

these will pass overhead from the evaporator and enter the first tower.

The evaporator has been made by simply setting the replaced shell still on end

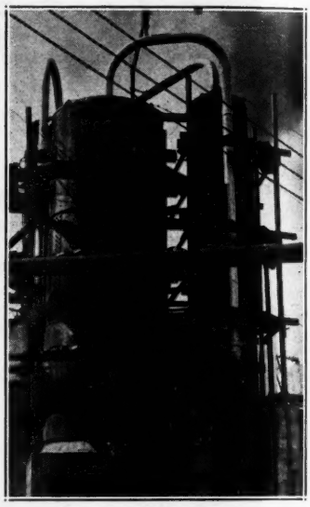
Roof tubes are shown in position. Note bolted tube sheets.

and five baffle plates or spreader sections have been added, as shown. Two of these sections are above the vapor inlet from the still and the other three are below this inlet. A wet trim of light gas oil will be pumped into the evaporator just below the top baffle plate to give a control on the overhead stream. This stream will include the gasoline, kerosene and light gas oil. The bottoms will go to two 8'x23' shell stills to be further reduced.

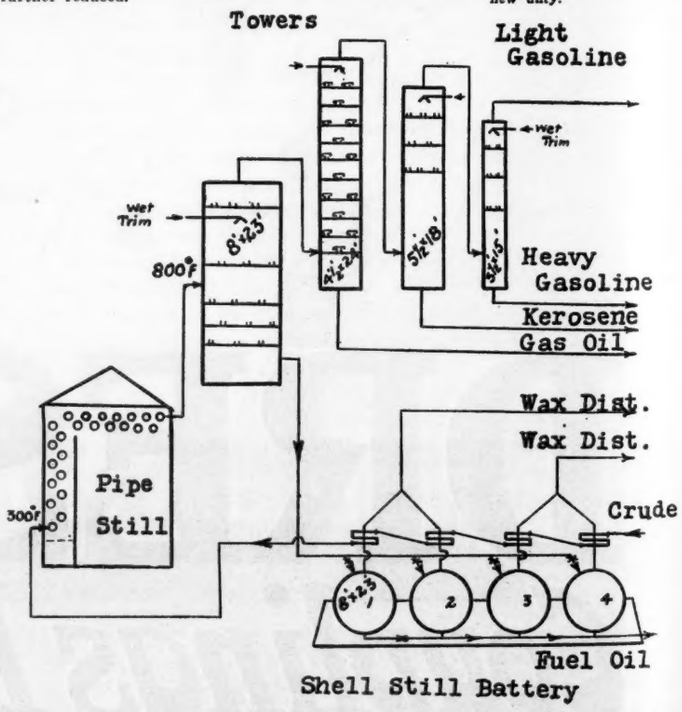
The overhead stream then enters a 4'6"x24' tower containing 10 trays of bubble caps where the control is fixed so that all of the fraction heavier than kerosene is knocked back and the overhead from this tower, including all of the gasoline and kerosene, goes to a second tower. This tower is 6'6"x18' and contains three baffle plates. A gasoline wet trim is pumped over this tower and the knock-back is taken off of the bottom as the kerosene stream.

This leaves only the gasoline fraction to be further processed and the overhead from this second tower then enters a third tower where a light gasoline is

(Continued on Page 131)



Picture of evaporator made from old shell still while under construction. The small tower to the left is also a reconditioned shell still which has been converted to the new duty.



Flow chart showing the proposed method of operating revamped distillation unit at the Stoll Oil Refining Co. plant.

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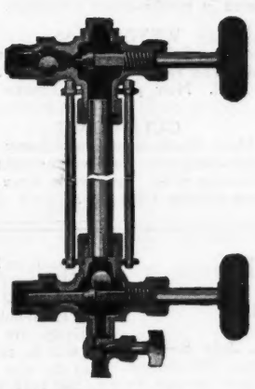

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ST. CLAIR PRESIDENT OF UNION OIL, CLARK CHAIRMAN OF THE BOARD

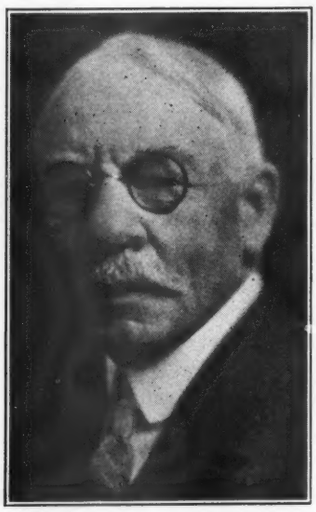
By L. P. Stockman

LOS ANGELES, Calif., July 7.—Directors of the Union Oil Co. of California elected Leonard P. St. Clair president of that organization at the directors' meeting held in Los Angeles today and at the same time elevated W. L. Stewart to the position of vice president, and E. W. Clark as chairman of the board of directors.

Mr. St. Clair, who succeeds William

L. P. St. Clair

Lyman Stewart who passed away June 21, has been one of the dominant figures in the oil industry in the West for the past quarter of a century. It was approximately 25 years ago that he helped organize the Independent Oil Producers Agency of which he has been president for 22 consecutive years. The agency composed of a large number of independent producers in the San Joaquin Valley was the outgrowth of a period of low priced crude oil which would have resulted in virtual destruction of independent producers except for the consolidation effected. Mr. St. Clair is also at present vice president at large of the American Petroleum Institute in which he has been one of the leading figures since its organization. During the past two years he has taken the initiative in bringing about a curtailment of crude oil production in this State and is generally recognized as the father of the California gas conservation law enacted by the California State Legislature for the purpose of eliminating the waste of natural gas. It was through his outstanding achievement in organizing the independent operators in San Joaquin Valley fields and the stabilization of marketing and production conditions in those fields that led to his election in 1919 to the board of directors of



E. W. Clark

the Union Oil Co. On November 27, 1922, he was elected vice president and for a period of one year from 1926 to 1927 was in charge of the company's domestic and foreign sales. In 1927 due to his long experience as a producer he was placed in charge of the field and production activities and in July, 1929, he was elected executive vice president.

Mr. St. Clair, a native of California, was born at Dutch Flat, Placer County, where he attended public school until he was 16 years of age when his father

(Continued on Page 148)

THE OIL MAN'S CALENDAR

July 25-26—Seattle, Wash., first meeting, Washington Gas and Oil Association.

August 4-9—New York, International Exposition of American Import Trade, Grand Central Palace.

September 2-4 — Toronto, Ontario, North American Gas Tax Conference, King Edward Hotel.

September 8-12 — Cincinnati, Ohio, Eightieth meeting, American Chemical Society, Hotel Gibson.

September 17—Columbus, Ohio, Ohio Petroleum Marketers Association, Deshler-Wallick Hotel.

September 17-19—Atlantic City, N. J., National Petroleum Association, Hotel Traymore.

September 29-October 4—Pittsburh, Pa., petroleum section, National Safety Council.

October 3—Tulsa, Okla., Board of Directors, American Petroleum Institute, Mayo Hotel.

October 4-11—Tulsa, Okla., International Petroleum Exposition and Congress.

October 6-11 — Washington, D. C., Sixth International Road Congress.

October 14-16 — Kansas City, Mo., convention, Big Four State Jobbers.

October 22-24—Pittsburgh, Pa., Transportation meeting, Society of Automotive Engineers.

November 2-5—St. Louis, marketing congress, Independent Oil Men of America, Statler Hotel.

November 10-13—Chicago, Eleventh annual meeting, American Petroleum Institute, Stevens Hotel.

December 1-5—Memphis, Tenn., Ninth Annual Asphalt Paving Conference, the Asphalt Paving Conference, the Asphalt Institute and Association of Asphalt Paving Technologists.

DARST CREEK PRORATION

SAN ANTONIO, Tex., July 5.—Total potential production of the Darst Creek Field in Guadalupe County as announced by the proration committee dropped 38,343 bbls. to a total for the field of 129,406 bbls., which was the potential of the field June 15. Allowable runs for the period, July 1 to 15, is 20,389 bbls. compared with 21,928 bbls. for last half of June. There are now 152 wells and for the last half of July 142 wells.

COASTAL MARKET UNCHANGED

HOUSTON, Tex., July 8.—The Gulf Coast refinery market the past week continued to maintain a steady to strong tone in all products except gasolines. The latter market was unsettled. Fuel oils Tuesday were being held firmly. The situation still was fairly tight as to supply, although material was available at sellers' quotations. Gas oil was firm.

Pale and red oils continued to find a steady tank car outlet. The movement, as has been the case for several months, was sufficient to maintain prices.

High Spots in Field News

CALIFORNIA

Playa del Rey gets its biggest producer, flowing 4,760 bbls. and 3,100,000 feet of gas.

KANSAS

Voshell area will be most affected by reduction of pipe line runs. Good wells in State Line Pool.

NORTH LOUISIANA-ARKANSAS

Possibility of gas from lower series of the Trinity suggested by Claiborne Parish wildcat and Bellevue completion.

OKLAHOMA

Oklahoma City Pool extended northwest. Potential peak in south end of pool thought to have been reached; original rock pressure dropping.

SOUTHWEST TEXAS

Big Wells in Escobas district of northeastern Zapata County overshadow operations in Southwest Texas. Thought to be most important pool in Laredo district.

NORTH TEXAS AND PANHANDLE

New White Deer Pool in Carson County not so encouraging. Young County wildcat looks like commercial producer. Well in Lloyd Pool, Coleman County.

ROCKY MOUNTAIN AREA

Tidal well, mile east of production, Hobbs Pool, Lea County, New Mexico, flows 1,000 bbls. in first hour. Potential of field estimated around 60,000 bbls.

New gas horizon opened in northwestern Colorado.

WEST TEXAS

Sunray and Llano well, north of production in Penn Pool, Ector County, had show of live oil. Two fair-sized wells in Irion County. Twenty-one old producers abandoned in McCamey Pool. New proration figures for Howard-Glasscock and Penn Pool.

GULF COAST

Second producer at Moss Bluff, Southern Liberty County, flowed 1,000 bbls. initially. At Refugio, Moody-Seagraves well was brought under control but Houston Oil Co.'s well was still blowing wild. Two wells were completed in Sulphur, Calcasieu Parish, Louisiana, one flowing 1,500 bbls.

Late Fields

NEW MEXICO

FORT WORTH, Tex., July 8.—The Tidal Oil Co.'s No. 1 Grimes, SE Section 29-18s-38e, Lea County, New Mexico, is shut in at 4,160 feet after flowing 1,000 bbls. the first hour. It is the biggest well in the field to date and is located 1 mile east of production. The first saturated core was taken at 3,975 feet.

WEST TEXAS

FORT WORTH, Tex., July 8.—Sunray and Llano Oil Co.'s No. 1 Jones, Section 6, one-half mile north of production in the Penn Pool, Ector County, had a rainbow show at 3,709-17 feet; show of dead oil at 3,722-31 feet, and a show of live oil at 3,741-47 feet; now drilling ahead at 3,750 feet.

KANSAS

The latest test to reach the pay horizon in the new Eastborough Pool, east of Wichita, Sedgwick County, Kansas, was the Vickers Petroleum Co.'s No. 1, in Section 30-27-2, Sedgwick County. The test found pay at 2,950 feet, where the oil rose several hundred feet in the hole in a short time. The crew was pulling the big pipe before drilling deeper. The new well extends production a quarter of a mile east. The area is to have a new pipe line outlet, which is now under construction by the Golden Rule Refining Co. of Wichita. Two other pipe lines are being considered one by the Vickers Petroleum Co., and the other by the Derby Oil Co. Both of these companies own acreage in the pool and are drilling tests close to the discovery well. Fisher & Lauck, owners of No. 2 Trustee, in Section 19-27-2, the 1,500-bbl. well which started all the activity, are building a 10,000-bbl. tank. It will be ready for oil during the week and the new well which has been pinched to 200 bbls. a day will be allowed to flow wide open.

The Lario Oil & Gas Co. has extended production in the Gelwicks Pool, in Butler County. The well is located in the SE cor. NW SW, Section 6-27-4, and had the pay horizon at 2,939-40 feet, where the oil rose 2,600 feet in the hole after striking the pay. It is believed that part of the fluid is water. It was being tubed preparatory to being pumped.

The hopes of opening another oil-producing area in Reno County were bright when the wildcat test of McBride, Inc., and others' No. 1 Bacon, in Section 36-23-5w, found oil at 3,812-17 feet. The oil rose 500 feet in the hole in one hour. The oil was found in the Viola lime, which is believed to be running favorable on the structure, compared to other tests drilled in the vicinity. The crew was cementing the casing and a production test will be made in a few days.

OKLAHOMA

The potential gauge of the Konawa Pool in Seminole County, Oklahoma, is estimated at 92,000 bbls. at the present time. The gauge of the pool on July 8 was 19,564 bbls. from 85 wells.

The wildcat test southwest of the Earlsboro Townsite, Lippa Drilling Co. and others' No. 1 Billington, NE cor. SE NW, Section 19-9-5, Pottawatomie County, had water in the Wilcox sand at

(Continued on Page 154)

SCORE CARD ON OIL PRODUCTION

Below is shown allotted average daily production in the United States, April to December, inclusive, suggested by the Committee on Economics of the Federal Oil Conservation Board, and the actual daily average production during the week ending July 5:

	Allotted (bbls.)	Actual (bbls.)	Over (bbls.)	Under (bbls.)
California	610,000	604,500	.....	5,500
Oklahoma	655,000	655,120	120	.....
Texas	750,000	862,697	112,697	.....
Other fields	480,000	487,966	7,966	.....
Total	2,495,000	2,610,283	120,783	5,500

Net average daily overproduction 115,283 bbls.

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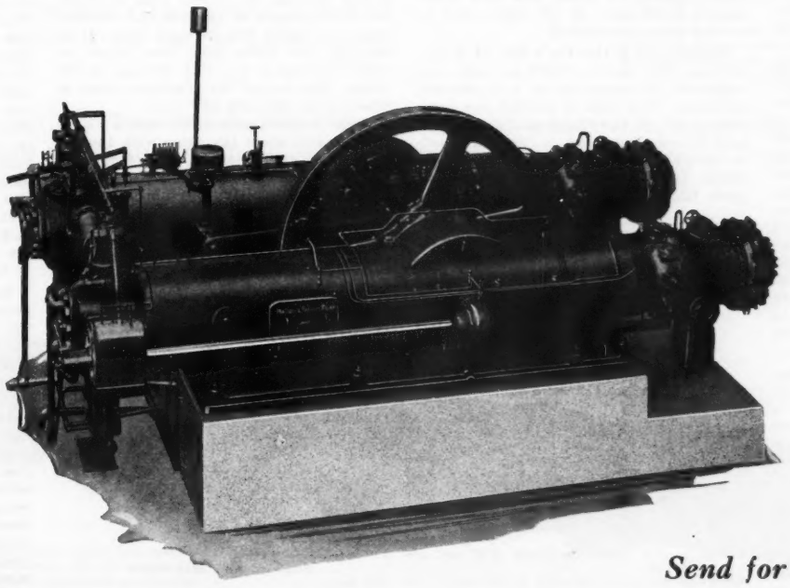

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Okla. City Pool Extended Northwest

Some Observers Believe Operating and Potential Peak of Field Has Been Reached. Other Pools on Increase

By W. A. Spinney
Staff Correspondent, Oklahoma Fields

Coincidental to the announcement of a reduction in the quantity of crude oil to be purchased by the Prairie Oil & Gas Co., the production of Oklahoma shows a decline of about 9,100 bbls. a day. The total for the State is estimated at 655,100 bbls. a day. During the week the Oklahoma City Pool was extended about a half mile to the northwest. A wildcat test about 15 miles north of the Oklahoma City Pool was showing gas.

Prairie Oil & Gas Co. and Tom Slick Oil Co.'s No. 1 Dills, SE cor. NW, Section 17-13-3w, Oklahoma County, a wildcat, had indications of developing into a gasser through water from a total depth of 6,607 feet. The test has been showing a trace of gas while drilling, and the crew estimated an increase was found at 6,598 feet on Sunday morning. There is a difference in opinion as to what horizon the gas was found in. Some believe it is in the Viola lime while others say it is in the Simpson series. Samples were taken and identification work was started at once.

The wildcat test is located on a block of about 4,000 acres and is close to another test drilled by J. V. Bailey and Tom Slick, in the C NE SE, Section 18-13-3w, which was abandoned at 5,130 feet. Several showings of gas were found in that well which resulted in the second test being drilled. North of this test the Mid-Kansas Oil & Gas Co. and Ramsey Petroleum Co. are drilling No. 1 Messer, SW cor., Section 32-14-3w, which was drilling below 5,500 feet on the last report.

Hall & Briscoe and others' No. 2 A. Lindsey, SE cor. NE NE, Section 15-11-3w, in the northwest part of the Oklahoma City Field, and the first well in Section 15, extends production a half mile to the northwest. The well is located near the Oklahoma City limits and was bailed in several days before being tested. It flowed 78 bbls. the first hour and was shut in. The sand was found at a total depth of 6,475 feet. It was again tested the next day and flowed 306 bbls. in 25 minutes and then bridged. It is believed the hole is not thoroughly cleaned out and it will be necessary to clean out the well before completing its initial gauge.

In the northern part of the field Century Petroleum Co.'s No. 1 Wyatt, C NE NW NW, Section 2-11-3w, had a showing of oil at 6,215 feet and again at 6,321 feet. The nearest production is the Wirt Franklin Petroleum Corp.'s No. 1 Wright, NE cor. NW, Section 2-11-3w. The Century Petroleum Co.'s well may extend production a quarter mile west toward the city limits.

Potential Peak Reached

Some operators express the opinion that the big drop in the rock pressure in the south end of the Oklahoma City Pool indicates the peak has been reached in potential production in that area. The original rock pressure of the wells has dropped from 2,200 pounds to around 1,000 pounds, according to a survey recently made.

It is also estimated that the potential production of the field has shown a decline despite new completions with a large output. The wells producing from the Silicious lime all have declined and practically every one is making water, and the water encroachment is gaining daily. Some of the latest wells completed from the Silicious lime have shown from 5 to 50 per cent water on the initial gauge. It is believed the potential production of the field, including the shut-in wells, has dropped from 1,500,000 bbls. on April 1 to 1,000,000 bbls. on July 1.

The producing area is believed to be defined on the east by a fault, on the southwest by a water well. The limits of the sand production on the west and north, where the Simpson and Wilcox sands are found, is still a matter of guesswork. It is believed these formations will extend inside the city limits.

Due to the proration plan, which has been in operation in the field from the start, a production curve by wells is more or less speculative. An example of the decline by wells is one that was produced for three days as follows: The first day's production was 1,400 bbls., the second was 800 bbls., and the third was 400 bbls.

The field has produced approximately 23,000,000 bbls. of oil to July 1 from 320 wells and 420 new operations are under way. If the production extends inside the city limits of Oklahoma City, the drilling operations are expected to show a large increase as the city tests are being located on small tracts of land.

The southwestern part of the Oklahoma City Pool was given added importance when the Indian Territory Illuminating Oil Co.'s No. 3 S. Peterson, NE cor. SE SW, Section 25-11-3w, was bailed in and made 165 bbls. of oil in 20 minutes. The gas volume was estimated at 30,000,000 feet. It was immediately shut in for larger connections. The well was drilled to a total depth of 6,675 feet. It later flowed 6,327 bbls. in 16 hours. Same company's No. 1 S. Peterson was drilled deeper to 6,494 feet and made around 5,000 bbls. of oil when shut in for the proration period.

Sinclair Oil & Gas Co.'s No. 11 Vencl, SW cor. SE, Section 31-11-2w, was also completed the same day as a 25,000-bbl. producer. The well is located one location north of the Oklahoma and Cleveland County line and is the north offset to the Continental Oil Co.'s No. 1 Sudik, in Cleveland County. The well made 12,515 bbls. the first 12 hours and was then shut in, because of the lack of storage and pipe line facilities. The total depth is 6,649 feet and the gas volume was estimated at 40,000,000 feet.

Washing In Proves Successful

Operators in the Oklahoma City Field have again demonstrated the new method of bringing wells onto production by the washing-in method in the high pressure area in the field is successful. The huge gushers that have been completed were under control at all times. The Indian Territory Illuminating Oil Co.'s No. 3 Mary Sudik, NW cor. NE SW, Section 31-11-2w, was washed in. The mud was washed from the hole and the water bailed down about 2,000 feet where the test started to clean itself. The total depth of well is 6,535 feet. It was first estimated at 20,000 bbls. The well was shut in until the next day when it was opened it refused to flow. It was again bailed down 1,200 feet and it flowed into the tanks and made 184 bbls. in 45 minutes. The gas volume was estimated at 8,000,000 feet. It made 4,341 bbls. in eight and one-half hours. The same company's No. 5 Mary Sudik, SW cor. NE SW, Section 31-11-2w, which was bridged near the bottom of the hole at a total depth of 6,665 feet, several days ago, was threatening to blow out while the tools were rotating in the hole. The tools were sent back into the hole after it had been bailed down to the 5,000-foot level and failed to flow.

The wildcat test of the Prairie Oil & Gas Co. and Tom Slick Oil Co.'s No. 1 Dills, SE cor. NW Section 17-13-3w, north of Britton, Oklahoma County, drilled through the cement plug at 6,555 feet with a show of gas and was drilling deeper at 6,572 feet in hard lime. It is believed the Viola lime was found at 6,530 feet and it was still drilling in the Viola. The top of the Simpson series is expected in the next few feet.

Other wildcat tests in Oklahoma County remained about the same with the exception of the Magnolia Petroleum Co. and Ramsey Petroleum Co.'s No. 1 Johnson, NE cor. SW Section 35-13-3w, which was drilling in Sylvan shale at 6,875 feet.

Getting Rid of Stocks

The Wirt Franklin Petroleum Corp. has shut down all of its producing wells for 24 hours in order to permit the pipe line companies to catch up and remove the surplus oil held in the storage tanks on the leases. Same company was bailing down its No. 2 Theimer, NE cor. SE last week and failed to flow. The well Section 2-11-3w, which was bailed down swabbed 15 bbls. of oil in seven hours on its latest test from a total depth of 6,511 feet in sand. It may be drilled deeper.

Further reduction in the pipe line shipments is expected as the result of the Prairie Oil & Gas Co.'s announcement of a reduction in its runs which was necessary to meet its customers' refinery requirements. The Prairie Oil & Gas Co. may reduce its runs as much as 25 per cent in the Oklahoma City Pool. At this time the reduced runs will be effective in all areas in the State.

Sinclair Oil & Gas Co. added another well to its lease on School Land 54 in the south end of the field. The well was No. 15, NE cor. SW NE Section 36-11-3w. When opened it made 490 bbls. the first hour, and 3,705 bbls. in 12 hours. The gas is estimated at 10,000,000 feet and the total depth of well is 6,553 feet.

Blew Wild Short Time

The Sinclair Oil & Gas Co.'s No. 4 Vencl, NW cor. NE SE Section 31-11-2w, flowed wild after being opened for its regular producing period. The well was opened the middle of the week and the sand cut through the old connections, allowing the oil to flow into the air. It was estimated to be making about 5,000 bbls. a day and 35,000,000 feet of gas. Workmen succeeded in shutting in the well after it blew wild for 12 hours. It was only four hours after the crew arrived at the well the new master gate was in place. During the time the well was open the spray of oil and gas was in a northern direction but did not reach the city limits. A survey of the adjoining area showed the oil and gas did not carry more than a mile and a half north of the well, which is located 6 miles south of the city.

Mid-Kansas Oil & Gas Co. has completed its No. 1 Trosper-Browning, in the SW cor. NW NW Section 18-11-2w, in the northeast part of the field. The well made 994 bbls. in 14 hours from the Silicious lime at 6,066 feet and drilled to a total depth of 6,443 feet.

Reynolds & Unruh's No. 1 in the SW cor. NW SW, Section 1-11-3w, in the north end of the pool, was bailed in about two weeks ago and flowed 15 minutes before being shut in when the connections were damaged by the sand. It was again opened for its initial gauge during the week and made 961 bbls. the first hour and 3,555 bbls. the first 4 hours and 10 minutes. The sand started cutting again and the crew was forced to shut the well in for repairs. The gas volume is estimated at 60,000,000 feet. The well was opened the third time later in the week and made 550 bbls. in 20 minutes. Sand is still showing in the oil and it necessitates careful handling. The operators are taking the initial gauge by allowing the well to produce for a few minutes each day. Three more producers have been completed in the Beebe area in northern Pontotoc County. Dixie Oil Co.'s No. 2 Roper, SE cor. NW, Section 32-5-5, made 120 bbls. from a series of sands at 2,468-93 feet and 2,505-07 feet. Benedum & Trees' No. 1 Starritt, in Section 28-5-5, was plugged back to 2,404

(Continued on Page 72)

WILDCAT OPERATIONS IN OKLAHOMA

(Descriptions are East and North unless marked otherwise)

NORTHERN OKLAHOMA

ALFALFA COUNTY

Company, farm and location—	Remarks:
Smith Brothers' No. 1 Forbes, SE cor. NW NW Sec. 12-27-11w	Cleaning out 1,232 ft.
J. W. Bailey's No. 1 Acre, SW cor. NE Sec. 14-24-11w	Rigging up standard tools 4,660 ft.; cleaning out.

BECKHAM COUNTY

White-Woodward & Peters' No. 1 Green, C SW SW Sec. 34-10-24w	Abandoned 1,200 ft.
Ray Johnson and J. R. Cuniff's No. 1 Brower, C NW Sec. 29-10-22w	Drlg. 3,296 ft.
Producers Exploration Co.'s No. 1 Sidell, SE cor. SW SW Sec. 17-9-22w	Shut down 2,402 ft.
Carson et al's No. 1 Danby, SW cor. SE NE Sec. 20-8-22w	Shut down 1,575 ft.

BLAINE COUNTY

Lowen et al's No. 1 Unknown, NW cor. SW NW Sec. 17-16-11w	Spudded and shut down.
Washoma Oil Co. et al's No. 1 Phillips, C NW SW Sec. 12-19-10w	Underreaming 3,550 ft.

CADDO COUNTY

Sims Pet. Co.'s No. 1 Cobsa, SW NW Sec. 24-6-11w	Rig.
W. J. Hartley's No. 1 Galbreath, SE cor. NW SE Sec. 29-5-12w	Shut down 3,394 ft.

CHEROKEE COUNTY

Weaver & Proctor's No. 1 Benge, NE SE Sec. 8-14-21	Spudding.

CLEVELAND COUNTY

Harris et al's No. 1 Highbee, SE NW Sec. 20-6-1	Drlg. 6,485 ft.
Daniels & LeWright's No. 1 Vandever, C SW Sec. 15-7-1w	Shut down 3,130 ft.

COAL COUNTY

A. M. Van Orden's No. 1 Jamison, SE NW Sec. 31-1-9	Shut down 1,300 ft.
Blackwell O. & G. Co.'s No. 1 L. Jackson, NW cor. Sec. 26-3-9	Drlg. 48 ft.
W. E. McGraw's No. 1 King, C SW NE Sec. 11-1-8e	Shut down 3,030 ft.

COMANCHE COUNTY

Croy & Young's No. 1 Cline, NW NE NE Sec. 8-3-10w	Rig.
Shasta Oil Co.'s No. 1 Romwalt, SW NW Sec. 11-2-10w	Drlg. 1,050 ft.
V. Wright's No. 1 Indian Land, SE SW Sec. 29-2-9w	Swabbed 4 bbls. 1,920-34 ft.; total depth 2,185 ft.; abandoned.
G. W. Stogner's No. 1 Doebel, C SW SW Sec. 3-3-9w	Shut down 1,450 ft.

(Continued on Page 159)

REFINERIES

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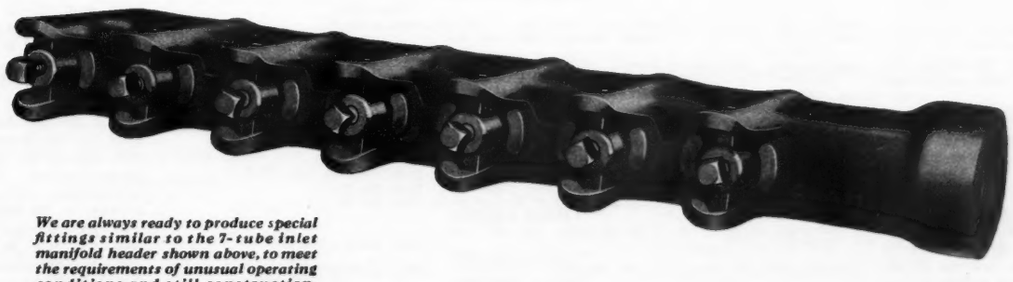

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Production in Kansas Cut Deeper

Voshell Will Be Most Affected by Reduction of Pipe Line Runs. Good Wells in State Line Pool. Other Extensions

By W. A. Spinney
Staff Correspondent, Kansas Fields

Kansas shows a decline in the estimated daily average production for the week ending July 5 to 131,200 bbls., or about 2,700 bbls. a day. The State has a total of 334 operations for the same period. Of this total, 191 were drilling, and the remainder were locations, rigs and shut-down operations. A further decline may be expected in the coming weeks, due to the curtailment of runs by different pipe line companies. Producers are expecting to be advised of reductions in crude receipts by other pipe line companies following the statement of the Prairie Oil & Gas Co., which announced a reduction in its purchases of about 25 per cent.

The pipe line companies in the State are increasing the curtailment program. In the Voshell Pool, in McPherson County, allowable production has been reduced to 18,000 bbls. per day during the first 15 days in July, as against an allowable of 21,000 bbls. a month ago. The production of the pool is being curtailed to pipe line capacity and new restrictions. It is estimated Voshell has a potential of 45,000 bbls. a day if the wells were swabbed. The Ritz Pool, in McPherson County, is curtailed to 50 per cent of potential. The allowable production is about 4,900 bbls. a day. The Schurr Pool in Rice County is producing about 250 bbls. a day from five wells, and has a potential of about 5,500 bbls. a day. Proration has been abandoned in the Valley Center Pool in Sedgwick County because of the rapid increase of salt water in the wells. The pool is making about 15,000 bbls. a day of oil. The Greenwich Townsite Pool in Sedgwick County, is being curtailed to 100 bbls. per well. The area has 14 producing wells, with a potential of 6,500 bbls. a day.

Skelly Oil Co. has reduced its runs in the Voshell Pool in McPherson County from 4,500 bbls. a day on an average to around 2,500 bbls. a day. The Derby Oil Co. has reduced its runs in the Voshell Pool 5,000 bbls. a day to about 2,300 bbls. a day.

The Prairie Oil & Gas Co. has advised the operators in the Voshell Pool in McPherson County that it will reduce its runs in that area from 6,000 bbls. a day to 3,000 bbls. a day. In making the announcement, the Prairie Oil & Gas Co. further states that it is necessary to curtail its runs in all parts of the Mid-Continent area, including Kansas, Oklahoma and Texas. Due to curtailment of refinery operations, the Prairie Oil & Gas Co. will require about 40,000 bbls. a day less of crude oil.

The Raymond test of Rogers and others was shut down in shale at 3,253 feet with nothing showing. Lassen and others' No. 1 Schrader and others in Section 10-21-10w, south of the Raymond townsite, was also shut down at 3,395 feet with a showing of oil. It is believed the test will be drilled deeper. Rogers and others' No. 1 Gill, in Section 27-20-10w, has drilled through the Schurr sand, and had a showing of oil. It is believed the operators plan to drill the test to the Silicious lime, which is the producing horizon the other wells are producing from to the northwest.

The Danciger Oil & Refining Co. has purchased an interest in Rogers and others' test on the Raymond townsite in Section 27-20-10w, Rice County, and the 7 acres of leases there, from John Rogers. The test is believed to be running favorably on the structure and drilling operations are expected to be resumed in a few days.

The third showing of gas was found in the C. B. Davis test in the SW cor. NW Section 22-20-10w, a wildcat east of the Schurr Pool in Rice County. The latest showing of gas was found at 2,566-91 feet, and is estimated at 2,000,000 feet. A showing of oil was found at 2,591 feet, where water was also found. The first showing of gas was found at 2,000 feet, and the second at 2,315 feet.

The wildcat test of McBride, Inc., and others' No. 1 Bacon, SW cor. NE SW Section 36-23-5w, Reno County, had the Viola lime at 3,812-17 feet, where oil rose 500 feet in the hole in an hour. It was swabbed and made 2½ bbls. per hour. The crew was underreaming the 6-inch casing from 3,692 feet to the top of the Viola.

Several wells in the Eastborough Pool, east of the city limits of Wichita in Sedgwick County, are nearing the pay horizon. The test of Spencer & Wixson, about a half mile northeast of the new well that opened the activities, was drilling at 2,820 feet. Vickers Petroleum Co. and others' No. 1 Keys, in Section 30-27-2, the south offset to the gusher well, was drilling at 2,932 feet, and is near the pay. The Fisher & Lauck well, which caused all the excitement, has been pinched to 10 bbls. an hour.

A pipe line connection is being made to Tatlock, Shell Petroleum Corp. and others' No. 1 Tonn, in Section 17-25-4w, in eastern Reno County by the Shell Petroleum Corp. It is a 2-inch line and the company is erecting a loading rack near Haven. On a recent pumping test the well made 285 bbls. of oil and 15 bbls. of water. The construction of a pipe line into the area is expected to result in new locations surrounding the well.

The Derby Oil Co. has completed a new well in Woodson County, located in the SW cor. NE NW Section 29-23-15. It made 85 bbls. the first 24 hours. The oil was found at 1,528-43 feet.

The first well completed in the Haverhill Pool, in Butler County, outside of the Empire Oil & Refining Co.'s holdings was found during the week by Connell and Austin. The well was No. 1 Nixon, SE cor., Section 20-27-5, on the east side of the pool. The test had 20 feet of sand and it was expected to make a small producer after a shot.

The Imo Oil & Gas Co. has a hole full of water in a conglomerate horizon at its wildcat test in Russell County. No. 1 Wambley, SE cor. NW NE, Section 7-14-14w, found water at 3,328-30 feet. The test is located in the southwest part of the county.

In the north end of the Voshell Pool, in McPherson County, Slick, Pryor & Lockhart and others' No. 2 Grattan, SW cor. NW, Section 34-20-3w, had 5,000,000 feet of gas in chat at 3,035-85 feet. The gas will be bradenheaded and the test drilled deeper to the Wilcox sand. Sinclair Oil & Gas Co.'s No. 1 McCurdy, in Section 33-20-3w, was drilled deeper and made 23 bbls. an hour. The Wilcox sand was found at 3,298-3,305 feet. It was later drilled to 3,369 feet which is believed to be in the Silicious lime. The Slick, Pryor & Lockhart crew is preparing to install a separator to handle the oil and gas found in the chat in No. 2 Grattan after it had been drilled deeper. The total depth of the test was 3,089 feet where it is spraying oil.

Will Start New Work

The area north of the Burden Pool in Cowley County is due for some new work since the completion of the Lewis Production Co. and Shell Petroleum Corp.'s No. 1 Headley, in Section 19-31-6. The well swabbed 126 bbls. in 10 hours from Bartlesville sand at 2,864-2,918 feet. The well extends production about a mile north. Prairie Oil & Gas Co. and others' No. 1 Ewers, in Section 31-31-6, was plugged back to a total depth of 2,970 feet, and after a 100-quart shot it swabbed 20 bbls. in 24 hours. Three offsets to the Headley well are expected to start soon. It is expected to make a 100-bbl. pumper. At the south edge of Winfield, Tom Fine and others' No. 1 Boyd, in Section 32-32-4, is drilling a test in hopes of extending the production in that area.

Thirty-three Tests in Marion

Marion County which has been quiet since the Davis Pool proved a disappointment several years ago has 33 drilling tests. North of Lost Springs, Youker and others recently completed a new well which is making around 125 bbls. a day from the chat. It is located in the SW cor. SE SE, Section 10-17-4. Stearns & Streeter Co. announced a new location in the NW cor. NE NE, Section 15-17-4, Marion County, and if commercial production is found other tests are expected.

The fifth well was completed in the State Line Pool in Sumner County by the Gypsy Oil Co. in the course of the week. The first hour the well made 135 bbls. of oil. The oil is high gravity testing around 47 degrees. Before the tools could be removed from the hole the well started flowing, making 1,572 bbls. the first 24 hours. The Viola lime was found at 4,731 feet, and the first oil was found at 4,746 feet. The Wilcox sand was found at 4,770-72 feet where the well began flowing. The new well, No. 2 Enderud, extends production in the pool a quarter mile northwest. It is located in the NW cor. SW, Section 16-35-3w, Sumner County. The same company's No. 1 Enderud, in the same section, was completed in August, 1929, and made 2,665 bbls. the first 24 hours. Soon after it was completed the discovery well which is located one location east declined in production. The oil from the new well is being shipped in tank cars to the White Eagle Refining Co.'s refinery at Wichita.

Oxford Pool Extension

In the southwest extension to the Oxford Pool, in Sumner County, Lario Oil & Gas Co.'s No. 13 Wenrich, NW cor. SE NW, Section 23-32-2, is estimated at 200 bbls. a day on the pump. The oil was found in the Stalnaker sand at 2,010-80 feet. It was given a 240-quart shot and was cleaning out. It swabbed 80 bbls. the first 11 hours. The daily average production of the Oxford district, for the week ending July 5, was 9,080 bbls., the production by pools being as follows: Churchill, 4,060 bbls.; Oxford Townsite and southwest extension, 2,890 bbls.; Rainbow Bend, 1,565 bbls.; Carsonwaite Pool, 460 bbls.; Miller Pool, 105 bbls.

The two wells northwest of Wellington, in the Peasel Pool, in Sumner County, averaged 220 bbls. daily from the chat. The discovery, Slick, Pryor & Lockhart and others' No. 1 Peasel, in the NW cor., Section 33-31-1w, pumped 90 bbls. daily and 3 bbls. of water. Sinclair Oil & Gas Co.'s No. 1 Kamas, in Section 28-31-1w, the north offset, flowed 130 bbls.

The British American Oil Co. is rigging up to deepen its No. 1 McCarty, NE cor. NW, Section 31-25-17w. Edwards County. The well was completed in October, 1929. The well yielded an average of 38 bbls. a day the last week. The pay horizon was found at 4,545 feet. It will be drilled deeper to the same horizon that the Barnsdall Oil Co.'s No. 1 McCarty is producing from. It is making about 180 bbls. daily. The Wilcox Oil & Gas Co. and the Dixie Oil Co. and Amerada Petroleum Corp. are drilling an offset to the Barnsdall Oil Co.'s well.

Barber County

Barbara Oil Co. made location for No. 2 Angel, C NE NW, Section 23-33-13w. Skelly Oil Co.'s No. 1 Temple, SE cor. NE, Section 13-34-15w, has been abandoned at 5,662 feet.

Butler County

Pioneer Petroleum Co.'s No. 1 Crist, NW cor. SE, Section 33-26-4, is spudding.

(Continued on Page 129)

WILDCAT OPERATIONS IN KANSAS

(Descriptions are East unless marked otherwise)

Company, farm and location—	Remarks:
BARBER COUNTY	
Barbara Oil Co.'s No. 1 Hamblin, SW NW Sec. 24-33-13w	Drlg. 4,260 ft.
Skelly Oil Co.'s No. 1 Temple Ranch, SW NE Sec. 13-34-15w	Abandoned 5,662 ft.
Phillips Pet. Co.'s No. 1 Powell, SE cor. SE Sec. 11-32-10w	T. D. 4,234 ft.; underreaming 6-in. csg.
BARTON COUNTY	
Slick and Prairie's No. 1 Rude, SW cor. Sec. 11-16-13w	Drlg. 290 ft.
BUTLER COUNTY	
Pioneer Pet. Co.'s No. 1 Crist, NW SE Sec. 33-26-4	Spudding.
Farrell et al's No. 1 Sutton, NW cor. Sec. 18-28-7	Rig on ground.
Aladdin Pet. Co.'s No. 1 Metzger, NW SE Sec. 23-28-3	Drlg. 1,965 ft.
Gypsy Oil Co.'s No. 1 Osborne, NW SE Sec. 22-26-3	Drlg. 385 ft.
Joe Liggett's No. 1 Guanther, C SE NE NW Sec. 29-26-7	Drlg. 874 ft.
CHASE COUNTY	
Steinbuckel et al's No. 1 Stephenson, NE SW Sec. 4-20-6	Shut down 2,185 ft.
CLARK COUNTY	
Watchorn's No. 2 Morrison, NW NE Sec. 20-32-21w	Shut down 6,212 ft.
CLAY COUNTY	
Grisler et al's No. 1 Tivier, SW cor. Sec. 19-8-3	Shut down 50 ft.
COFFEY COUNTY	
Ritchey et al's No. 1 Rossenmacher, C SE Sec. 36-22-13	Drlg. 1,827 ft.
Roberts et al's No. 1 Hay, SW SE NW Sec. 32-22-15	Drlg. 220 ft.
COWLEY COUNTY	
Tom Fine's No. 1 Boyd, NW NE Sec. 32-32-4	Drlg. 1,265 ft.
Roth & Faurot's No. 1 Adams, C SW NE NE Sec. 19-32-8	Show oil 2,120-44 ft.; abandoned 2,360 ft.
DICKINSON COUNTY	
Severs et al's No. 1 Lavengood, NE SW Sec. 13-13-2	Drlg. 1,800 ft.
Cross' No. 1 Sanden, NE cor. Sec. 12-15-2	Rig.
Hiatt & Durham's No. 1 Wendt, NW cor. Sec. 17-16-2	Shut down 50 ft.
Kruger et al's No. 1 Diche, C NW NE NE Sec. 17-13-4	Shut down 2,935-43 ft.; water.
E. N. Morgan's No. 1 Whithair, NW SE Sec. 9-12-1	Drlg. 2,310 ft.
DOUGLAS COUNTY	
Steinbuckel's No. 1 Unknown, SW NE NW Sec. 34-14-21	Shut down 1,100 ft.
Jenkins & Scott's No. 1 Haden, SE NW Sec. 10-12-17	Shut down 1,800 ft.

(Continued on Page 160)

Possibility of Gas from Lower Trinity

Most Interesting Topic of Week in North Louisiana Following Triangle's Claiborne Parish Wildcat and Bellevue Completion

By D. H. Bancroft
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., July 7.—Possibilities of the lower members of the Trinity series as an additional source of gas to supply existing pipe lines radiating from North Louisiana and others that may be built in the future, as revealed by Triangle Drilling Co.'s Claiborne Parish wildcat and H. I. Morgan's latest completion on the southwest flank of Bellevue, are still the most interesting topic in this division and the happier frame of mind induced by the two wells is still entertained. Successive failures in the Holly district and very little better results in Zwolle, Urbana and Sarepta, the three active areas in the division, had produced a decidedly pessimistic feeling but demonstration of new reserves of a product for which there is an increasing market has changed things somewhat and there probably will be considerable deep drilling in the five or six areas where this deep sand gas is indicated. These are Panola County, Pine Island district of Caddo Parish, Bellevue, Haynesville, (probably oil), Sligo, Cotton Valley, Sugar Creek (the Trinity's deep area) and the Monroe "second sand." Wells in all these districts have fairly well proved the existence of deeper producing horizons.

There is also thought to be strong likelihood of deeper production in Richland, awaiting development when the 2,450-foot horizon reaches the stage the Monroe Field is at now. R. W. Norton's wildcat in the extreme northwest corner of the State, No. 1 Hill, Section 33-23-16, Caddo Parish, is looked upon as another possible "discovery well." It had 16 feet of sand at 3,685-3,701 feet that yielded an oil saturated core but failed to develop a producer and is now shut down at 5,300 feet arranging to set a string of 6⅝-inch to test 40 feet of oolitic lime, meanwhile behaving singularly like a well that is trying to come in without waiting for the bailer.

The Triangle Well

The Triangle well, in which Standard Oil Co. of Louisiana and Louisiana Gas & Fuel Co. each have a one-third interest, was listed as a completion this week and as intimated, is, with Morgan's well at Bellevue, Arkansas-Louisiana Pipe Line Co.'s Bienville Parish wildcat gasser completed last week and Norton's well in Caddo, quite the most important development in this division since Zwolle. It blew out at 4,322 feet and cored 17 feet into the oolite before being completed at 4,339 feet. It gauged 19,809,803 feet of gas at 1,810 pounds through 2-inch tubing with a gasoline recovery of approximately 1,000 gallons to 1,000,000 feet. The company's first success in this area, No. 1 Kilpatrick, in Section 7-19-5, was not so large a producer, 1,500,000 feet, but the gas was about twice as rich. It made about 15 bbls. of oil and considerable salt water while the present well, No. 2 Caskey, in Section 6-19-5, has neither oil nor water. Total depth of the Kilpatrick was 4,558 feet and its surface elevation is 15 feet higher than the Caskey.

The two wells mark the culmination of six years' exploratory drilling in the Sugar Creek area on geological studies by J. Y. Snyder, former president of A. A.P.G., who is interested in the company, and D. L. Perkins who is associated with him. In the course of this drilling eight shallow tests, one of which was later deepened, and the two last deep tests, were drilled, all the shallow ones and the first of the three deep tests being failures in the Blossom and other upper horizons which are productive elsewhere in this division.

The Trinity owns 8,500 acres surrounding the two gassers and will proceed to develop it for the deep gas as the Louisiana Gas & Fuel Co., now a unit of the new United Gas Corp., will build a tap to the Monroe-Latex 20-inch line completed over a year ago by Magnolia Pipe Line Co. which is now the property of the United, as soon as sufficient gas is available. It is possible also that Arkansas-Louisiana Pipe Line Co. whose 22-inch line from Monroe to Shreveport is not far off also may be in the market for some of the new production and build a tap to the field. Development of this territory will benefit a larger number of individuals than usually is the case since fee interests, royalties and mineral rights in the district are widely scattered—as indicated in the Triangle having to obtain between 600 and 700 signatures in the process of perfecting titles to its leases.

On Bellevue Dome

H. I. Morgan's experience on the Bellevue Dome is not so very different from the Triangle's at Sugar Creek. He has drilled six wells himself of which two have been successful as deep gassers, the last one—No. 1 Kendricks, in Section 22-19-11—a better well than early estimates made it. The first full test gauged 38,500,000 feet of gas from 7 feet of sand, total depth 1,786 feet: Immediately after its completion he got rig up for No. 5 Wetherbee in the SE SE, Section 21-19-11. Arkansas-Louisiana Pipe Line Co. followed completion of No. 2 Ashley in Section 15-16-10, Beinville Parish, as a 41,500,000-foot gasser with No. 3 Ashley in the same section which made only 2,500,000 feet, total depth 1,977 feet, and began two more, No. 1 Gardner, in the NE NE, Section 22-16-10, has rig up and No. 1 Thomas in the NW NE, same section, is a derrick.

Bossier Completions

Three of the six completions in Bossier outside of Bellevue were Arkansas Fuel Oil Co.'s No. 4-A Kilgore, in Carterville, Section 30-23-11, pumped 10 bbls. from 3,133 feet; No. 7-B Kilgore, Section 31-23-12, pumped 5 bbls. from 3,164 feet; and No. 2 Meyer, Section 36-23-11, made one of the best wells in the pool in several weeks, flowing 300 bbls.; total depth 3,167 feet. Eylers Oil & Gas Co.'s No. 1 Wise, Section 35-23-12, pumped 10 bbls. from 3,203 feet. The Texas Company's No. 5 Peyton, Section 25-23-12, pumped 45 bbls. from 3,162 feet. Louisiana Gas & Fuel Co. abandoned its deep test in the Ivan district of Bossier, No. 1 Crystal Oil Refining Co., in Section 7-21-11, when it tested dry at 4,410 feet. Location is approximately 15 miles north of where Morgan has been working. Its No. 7 Thigpen-Herold, in Section 19-17-11, Sligo district of Bossier, made a test in the shallow sand at 868 feet and got considerable gas but passed it up on account of the water that came with it.

Gulf Refining Co. abandoned location for No. 28-A Levee Board in Section 34-21-16, Oil City district of Caddo, and P. T. Mize's No. 1-A Louisiana Oil Refining Co., in Section 6-20-15, has been completed flowing 15 bbls. initial after a shot at 1,485 feet. A. E. Hudson and others' No. 1 Swett, in Section 4-11-3e⅛ Caldwell Parish, tested salt water at 1,608 feet and is abandoned. Arkansas Fuel Oil Co. topped the red beds at 3,305 feet in No. 1 Lewis & Co., Section 26-20-4, Lincoln Parish, and is drilling at 3,460 feet. A test in the Blossom, from 2,682-90 feet filled the hole 1,000 feet with salt water.

Daily Average Runs

Daily average runs from the field showed considerable of a decrease this week in comparison with last week's figures. Total runs averaged 95,370 bbls. compared to 97,485 bbls., most of the decline being in Smackover heavy oil shipments which fell off 1,940 bbls. Arkansas' average of 55,330 bbls. was 1,955 bbls. under last week's and Louisiana's 40,040 bbls. were 160 bbls. under last week's runs. Smackover light oil runs were off 105 bbls. and Zwolle declined 350 bbls. The Holly district of DeSoto Parish showed an increase of 165 bbls. Daily average runs from the several pools were:

North Louisiana

Caddo, light	9,635
Caddo, heavy	2,585
Homer	3,550
Haynesville	4,625
DeSoto-Red River	3,130
Elm Grove	430
Bellevue	600
Cotton Valley	2,100
Urania	5,120
Pleasant Hill	585
Sarepta-Carterville	3,270
Zwolle	2,920
Holly	1,390
Total this week	40,040
Total last week	40,200
Decrease	160

Arkansas

El Dorado	4,080
Smackover, light	5,175
Smackover, heavy	37,520
Stephens	910
Nevada County	1,060
Lisbon	950
Champagnolle	4,320
Mount Holly	100
Bradley	65
Urbana	1,150
Total this week	55,330
Total last week	57,285
Decrease	1,955
Total both states this week	95,370
Total both states last week	97,485
Decrease	2,115

Holly District Well

The long series of disappointments in Holly was broken for the Standard Oil Co., when No. 2-A Farmer, in Section 5-13-13, was completed flowing approximately 800 bbls. from 14 feet of sand, total depth 2,862 feet. Less than a quar-

(Continued on Page 126)

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

NORTH LOUISIANA
AVOYELLES PARISH

Company, farm and location—	Remarks—
R. E. Tippett's No. 1 Chateline, NE NE, Sec. 34-1n-3e.	Cored S.W; sand 3,140-47 ft; drlg. S.W. sand 3,400 ft; S.D. 3,410 ft.

BIENVILLE PARISH

Ark.-La. P. L. Co.'s No. 1 K. D. Gardner, 660 ft. S, 660 ft. W, NE cor., Sec. 22-16-10	Rig up.
Ark.-La. P. L. Co.'s No. 1 O. G. Thomas, 660 ft. S, 700 ft. W, NE cor. NW NE, Sec. 22-16-10	Derrick.
W. A. Nichols et al's No. 1 McDermott, 660 ft. S, 660 ft. W, NE cor. NE NE, Sec. 28-18-6	Tested dry 2,050 ft; drlg. sandy shale 2,270 ft.

BOSSIER PARISH

Andrews & Davelin's No. 1 Nattin, 100 ft. N, 250 ft. W, C, Sec. 15-22-14	Coring 1,000 ft.

CADDO PARISH

L. B. Mawk's No. 1 Swann, 440 ft. N, 200 ft. E, SW cor., Sec. 23-21-14	S.D. for fuel; T.D. 700 ft.
R. W. Norton's No. 1 Hill, 630 ft. N, 1,260 ft. W, SE cor. NE, Sec. 33-23-16	40 ft. Oolitic lime; arranging to cmt. 6⅝-in. 5,280 ft; T.D. 5,300 ft.

CATAHOULA PARISH

Dick Barbare et al's No. 1 L. McGraw, 150 ft. N, 150 ft. W, SE cor. SW NW, Sec. 30-10-9	Began drlg. June 11; cmtd. 10-in. 60 ft.
National O. & G. Co.'s No. 1 Kirkland, 585 ft. E, 495 ft. N, SW cor., Sec. 35-9-1n	Cmtd. 8-in. 2,000 ft; T.D. 2,100 ft.

CLAIBORNE PARISH

El Dorado Chief Oil Co.'s No. 1 Dance, C SW NE, Sec. 27-20-7	S.D. 2,240 ft.
Lue Oil Co.'s No. 1 Taylor, 1,153 ft. S, 360 ft. W, C, Sec. 16-22-6	S.D. 2,864 ft.

(Continued on Page 102)

LOUISIANA-ARKANSAS PROVEN AREAS

NORTH LOUISIANA
BOSSIER PARISH—BELLEVUE

Company, farm and location—	Remarks—
H. I. Morgan's No. 5 Wetherbee, 1,120 ft. N, 200 ft. W, SE cor., Sec. 21-19-11	Rig up.

BOSSIER PARISH—CARTERVILLE

Ark. Fuel Oil Co.'s No. 1 Bain, 330 ft. N, 330 ft. E, SW cor. NW SW, Sec. 31-23-11	75 ft. oil 3,170 ft; arranging test 3,208 ft.
Ark. Fuel Oil Co.'s No. 2 Bain, 300 ft. S, 300 ft. E, NW cor. SW, Sec. 31-23-11	Rig up.
Ark. Fuel Oil Co.'s No. 4-B Barnett, 330 ft. S, 330 ft. W, NE cor. NW NE, Sec. 36-23-12	Drlg. broken chalk 1,930 ft.
Ark. Fuel Oil Co.'s (formerly Muslow Oil Co.'s No. 1 Floyd, 990 ft. S, 330 ft. W, C, Sec. 25-23-12	W.O.S.R. 3,176 ft.
Ark. Fuel Oil Co.'s No. 1 Ramsey, 557 ft. S, 330 ft. E, C, Sec. 31-23-11	W.O.S.R. 3,171 ft.
Askew & Goodman's No. 1 Roberson, 330 ft. S, 282 ft. W, NE cor. SW SW, Sec. 25-23-11	Show oil, gas and S.W; T.D. 3,167 ft; T.A. 3,380 ft.
Del.-La. Dev. Co.'s No. 6 Bollinger, 330 ft. S, 220 ft. W, NW cor. Lot 17, in Lot 16, Sec. 31-23-11	Full oil; W.O.S.R; 15 ft. broken sand; T.D. 3,217 ft.
Greenwood Prod. Co.'s No. 2 Bollinger, 990 ft. W, 330 ft. S, NE cor. NE SE, Sec. 36-23-12	Cmtd. 6⅝-in. 3,138 ft; 5-ft. sand; T.D. 3,160 ft.
Gulf Ref. Co.'s No. 1 Alluma, 990 ft. N, 330 ft. W, SE cor., Sec. 36-23-12	Coring 3,170 ft.
Magnolia Pet. Co.'s No. 2 Matlock, 330 ft. S and W, NE cor. SE SW, Sec. 25-23-12	W.O.S R. 3,188 ft.
Magnolia Pet. Co.'s No. 3 Matlock, 330 ft. N, 330 ft. W, SE cor. SE SW, Sec. 25-23-12	Cmtd. 8⅛-in. 3,132 ft; T.D. 3,179 ft; arranging to deepen.
Magnolia Pet. Co.'s No. 2 Roberson, 330 ft. S, 330 ft.	

(Continued on Page 101)

Big Wells in Northeastern Zapata

Escobas District Overshadowing Operations Elsewhere in Southwest Texas. Most Important Pool in Laredo District

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., July 7.—Big wells in the Escobas district in northeastern Zapata County are attracting so much attention that operations elsewhere in Southwest Texas, which till now overshadowed everything, have been pushed out of the limelight a little. This week A. L. Edgington's No. 1-B Trevino, Block 26, Survey 412, Zapata County, at 1,250 feet flowed 500 bbls. the first five hours. Last week the Arnold & Ahler well southwest of the field came in flowing at about the same rate.

This area is between the old Jennings gas field in Zapata County on the west and the Randado Pool in Jim Hogg County on the east. The size of the wells compared with their depths makes the pool about the most important in the entire Laredo district and only two or three freakish wells in the whole Laredo district have ever produced more. There were 35 tests listed in that part of Zapata County the first of this week which is just half of all that are listed in the entire Laredo district. This week also Nordan & Morris completed their No. 1 Gutierrez in the Escobas Pool at 1,268 feet in Share 4 of Fanslers partition of the Comitas grant for a 350-bbl. well.

Within the past few months there have been some important sales in the Laredo district which seem to indicate there is considerable new activity in that territory and the past week three more new deals were added to these. O. W. Killam bought in fee the Villegas ranch near Reiser in Webb County consisting of 9,400 acres and also purchased from Usher Carson 60 acres in the Carolina-Texas Pool with five wells on the lease, in Survey 684. Magnolia Petroleum Co. purchased from John J. O'Hern 50 acres in Survey 174 in the O'Hern-Seacord Pool at the south end of the Cole Pool in Duval County and near where the company recently brought in an oil well opening a new sand.

Ten new locations were made in the Escobas Pool the past week.

Among the abandonments for the week was the Cole Petroleum Co.'s No. 69 Benavides in Webb County, Block 6, Survey 20, Mariana Arispe Subdivision, abandoned at 3,501 feet. This is the second deep test the company has started in that part of the big lease block to test sands below that producing gas at around 1,750 feet. R. F. Blankenship's No. 2 Garza, 425 feet to the north and west lines of Block 2, Survey 413, in the Escobas Pool which passed up the 1,300-foot producing sand, was abandoned at 1,623 feet where it had shown a little gas with salt water.

Pettus Area

Grayburg Oil Co.'s No. 1 Kimball in the southwest end of the Pettus Field, 7 miles from production, sanded up again and early this week was being cleaned out. This is the second time it has sanded up. There are, however, six tests starting to drill around it, and in the townsite the Houston Oil Co.'s No. 1 Beasley is a 450-bbl. well.

The number of tests listed in the Pettus area the first of the week had increased to 43 from 37 for the week before and there is every evidence that the territory will be the most active spot in Southwest Texas for some time.

Glasscock Brothers' No. 1 Townsite in the northeast corner of the townsite of Pettus is now complete and with a volume of 20,000,000 feet of gas is spraying considerable gasoline. There are also several tests drilling around Cosden's No. 1 McKinney west of the town of Pettus which extended the pool 2½ miles. Production from the field including that from Grayburg's No. 1 Kimball during the time it was producing and before it sanded up averaged per day as follows for the past week:

	Bbls.
Grayburg's No. 1 Kimball	244
Union Producing Co. four wells	2,770
Humble Oil & Ref. Co. three wells	1,958
Cosden's No. 1 McKinney	277
Total	5,249

The Houston Oil Co.'s No. 1 Beasley completed this week will increase this production somewhat as it is starting off with 450 bbls. daily on a three-eighths-inch choke. This test was completed at 3,903 feet and Glasscock Brothers' gas well was completed at 3,814 feet. The Glasscock well is three-quarters of a mile north of the Houston Oil Co.'s test. Cosden has cored the sand in his No. 2 McKinney at the proper depth and will likely have another producer in within a few days.

Corpus Christi Wild Gasser

R. A. Thompson's No. 1 Lawrence, west of Corpus Christi in Nueces County and a mile west of the Saxet gas field, picked up a gas sand at 1,732 feet, blew in, ran wild, cratered and swallowed the derrick and almost everything in sight. The crew was able to salvage some of the rig. Day tours only were being run and the crew drove into town to spend the night. The next morning when they came on the scene the well was wild and had covered the landscape with a few feet of sand. There are several things interesting about this well. One is that the sand was considerably shallower than in the Saxet Field. Another is that it is quite a little west of nearest production and next semiwildcat. It opens up something new. The crew was not looking for the sand for a few hundred feet more. Early this week Thompson's No. 1 Lawrence was still wild and flowing a lot of gas and had caught fire and was burning.

Darst Creek Area

In the Darst Creek area there were some disappointments. Penn-Tex Oil Co.'s No. 1 Roamel in the J. R. Robinson Survey topped the chalk at 2,606 feet and was abandoned there dry. It was 1,500 feet west of the big 42,000-bbl. well brought in by the Magnolia Petroleum Co. some weeks ago but got too far west and out of the field.

Also T. C. Hadley's No. 1 Hartwig in the Richard Nixon Survey in Guadalupe County, 6 miles southwest of production and in wildcat territory, but in the same general direction as the Darst Creek fault line, was abandoned at 3,175 feet in the Eagleford shale. It was running far too low to have any hope of making a producer.

There were three other completions in the Darst Creek Field for the week in addition to the dry hole of the Penn-Tex Oil Co., and all three were by the Magnolia Petroleum Co. Its No. A-2 Knodle came in for 500 bbls. daily at 2,544 feet, No. 3 Rand Miller for 150 bbls. at 2,634 feet, and No. 3 Richburg for 600 bbls. at 2,602 feet. This leaves seven tests drilling in the Darst Creek Field and about that many wildcats in the country around the field.

Joe Bruner Field

Gulf Production Co. completed its No. 4 T. Briscoe at the northeast end of the Joe Bruner Field the past week for 700 bbls. daily at 2,272 feet. It offsets the Humble Oil & Refining Co.'s No. 4 New, which came in for about 10,000 bbls. Both wells are shallow and lost the returns while drilling, giving rise to the idea that they went into a crevice. It is a customary explanation in that area when any well gets big production after losing returns and not having reached the Edwards lime.

One other well at the southwest end of the Darst Creek Field was looking bad last week and that is the Penn Oil Co.-Shell Petroleum Corp.'s No. 1 State Land in the river bed of the Colorado River. It got the Edwards lime at 2,720 feet and was trying to get a core. It will probably be abandoned and for a time dampens the idea of an extension of the field.

SOUTHWEST TEXAS

Branyon	60
Bruner	26,434
Buchanan	240
Dale	347
Darst Creek	28,541
Kingsville	119
Larrimore	33
Luling	9,440
Lytton Springs	806
Manford	400
McMullen	35
Medina	22
Mirando	11,455
Pettus	4,492
Somerset	1,538
Yoast	435
Chapman	5,913
Total week ending June 21	90,319
Total week ending June 28	93,418
Decrease	3,099

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

ATASCOSA COUNTY

Company, farm and location—	Remarks:
Frontier Oil Co.'s No. 1 Boynton, 1,000 ft. from S line, 3,700 ft. from E line of N. Flores Sur., 3 miles SW from Somerset Field	T. D. 2,480 ft.; drlg. in hard chalk.
Nute, Walder & Derden's No. 1 J. B. Young, 750 ft. W line, 370 ft. E line of 107-ac. tract in the Wm. Moore Sur.	Location.

BLANCO COUNTY

Liles-Adams et al's No. 1 Stanford, 150 ft. to S line, 1,420 ft. to E line of James Stanford No. 155	Spudded in.
McCreary et al's No. 1 Schenling, 900 ft. to SE line, 600 ft. to NE line of J. A. Rous No. 118 Sur., 4 miles SW from Blanco City	Spudded in.

BASTROP COUNTY

Judge Batts and others' No. 1 Alexander, 1,670 ft. N of S line, 528 ft. E of W line, Blk. 3 in the W. M. Eastland Sur., 3½ miles NE from Red Rock	T. D. 2,550 ft.; shut down in shale.
Pacific Oil & Gas Co.'s No. 1 J. Spooner, 300 ft. from N line, 400 ft. from W line in the L. Lavenuz Sur., 4½ miles E from Cedar Creek	T. D. 2,125 ft.; shut down in chalk.
Pacific Oil & Gas Co.'s No. 2 Spooner, 240 ft. from W line, 4,950 ft. from S line 450-ac. tract in the L. Levering Sur., 5 miles E from Cedar Creek	T. D. 650 ft.; shut down.
Majestic Pet. Co.'s No. 1 J. M. Breeding, 160 ft. from N line, 1,020 ft. from W line of 200-ac. tract, 940 varas from W line, 1,225 varas from S line of M. Andrews Sur., 13 miles W from Smithville	Drlg. 80 ft.; set surface csg.

BROOKS COUNTY

Houston Oil Co. of Texas' No. 1 Wormser-Holbien, 1,550 ft. S, 2,650 ft. E of intersection of Lisandro Saenz & Manuel Saenz tracts, El Palo & Blanco de Maguellas grant, SW of Lasater discovery gas	Location.
Houston Oil Co.'s No. 2 Wormser, 200 ft. N of CSL, 964-ac. tract in the P. Maguellas Sur.	T. D. 630 ft.; drlg. in sand.
Humble Oil & Ref. Co.-Shell Pet. Corp.'s No. 2 Wm. Singels, 1,320 ft. W of E line, 1,800 ft. S of N line of Sec. 312, Alta Verde area, 7 miles SE from Lasater gas field	T. D. 3,102 ft.; drlg. in sticky shale.

BEXAR COUNTY

Meore-Jauer's No. 1 Holly R. Ellison	T. D. 2,110 ft.; set csg. to test sand.
Morgan Bros.' No. 1 Barkmeyer, 1,650 ft. to N line, 600 ft. to W line of 600-ac. tract in the P. Villapando Sur., 8 miles SE from San Antonio	T. D. 50 ft.; spudded in.
J. M. Russell's No. 1 F. L. Price, 1,590 ft. to N line, 660 ft. W line of tract in Angel Navarro Sur.	T. D. 50 ft.; spudded in.

(Continued on Page 89)

COMPLETIONS

Darst Creek—Guadalupe County

Magnolia Petroleum Co.'s No. 2 A. Knodle, 450 feet southwest line, 150 feet northwest line of tract, 300 feet northeast of No. 1 in the J. R. Robinson Survey; total depth 2,582 feet; flowing 500 bbls.

Bruner Field—Caldwell County

Gulf Production Co.'s No. 3 Brisco, 450 feet to south line, 1,800 feet to west line of lease in the J. D. Rains Survey; total depth 2,740 feet; pumped 100 bbls. per day.

Nursery Pool—Victoria County

Humble Oil & Refining Co.'s No. 3-A Jay J. Welder, 1,634 feet southeast lines, 736 feet southwest lines in the D.L.&C. Survey; total depth 5,884 feet; plugged back from 6,300 feet; 500,000 feet of gas.

Kohler Pool—Duval County

Humble Oil & Refining Co.'s No. 46 Kohler, 990 feet north line, 1,155 feet east line, Survey 144; total depth 1,750 feet; 25,000,000 feet of gas; 450 pounds rock pressure.

Cole Pool—Webb County

Magnolia Petroleum Co.'s No. 2 A. Benavides, 150 feet north line, 150 feet east line, Survey 660; total depth 2,355 feet; 100 bbls. S. R. C. Co.'s (Trinity Drillers, Inc.) No. 1 Montemayor, 150 feet north line, 150 feet west line, Block 8, Survey 64; total depth 1,292 feet; sand 1,285-92 feet; 75 bbls.

Carolina-Texas Pool—Webb County

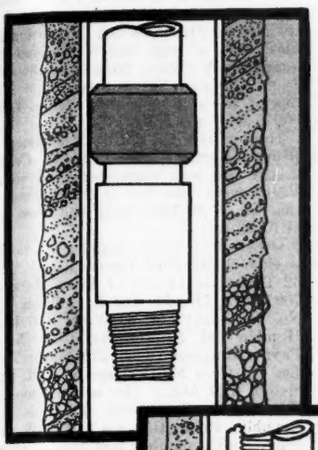
E. D. Claggett and Sam Evans' No. 1 Webster, 150 feet south line, 990 feet west line, Survey 684; total depth 3,074 feet; estimated 100 bbls.

Jennings Pool—Zapata County

Arnold & Ahler's No. 1 M. Garza, 450 feet northeast line, 450 feet northwest line, Block 1, Subdivision Zorro ranch, Comitas grant; total depth 1,364 feet; set 6⅝-inch casing at 1,356 feet; sand 1,359-64 feet; bailed oil when 225 feet off bottom, oil rose 65 feet in 10 minutes. W. R. Shankle's No. 2 Trevino, 150 feet northeast line, 150 feet southeast line, Block 14, Survey 65; total depth 1,250 feet; 125 bbls. Morris & Allen-Nordan & Morris' No. 1 J. G. Gutierrez, 150 feet northeast line, 150 feet northwest line, Share 4, Fansler Partition, Comitas grant; total depth 1,243 feet; 75 bbls.

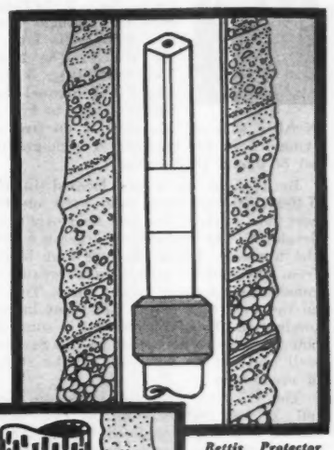
(Continued on Page 124)

8 applications of BETTIS PROTECTION



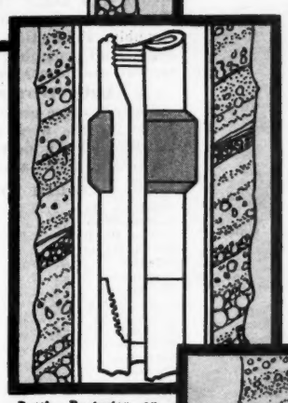
Bettis Protector on drill pipe to prevent contact with casing.

FULLY PATENTED

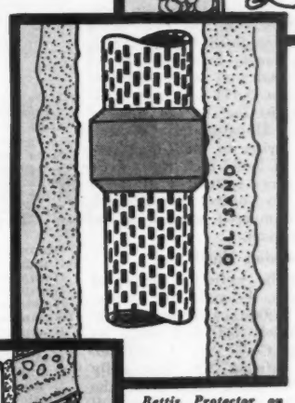


Bettis Protector on Kelly sub to prevent whipping.

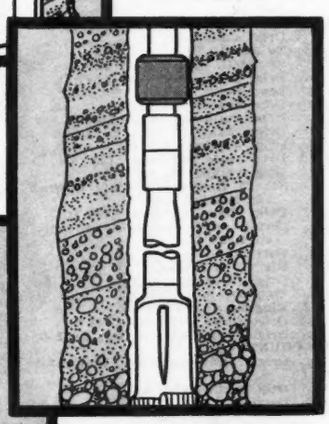
New uses for Bettis Protectors are suggested. Their success in preventing abrasion on drill pipe and casing has led to other important and practical applications, full details of which will be furnished by our engineering department.



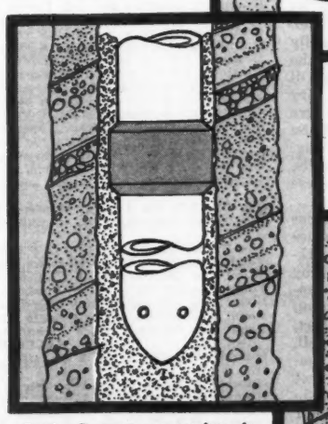
Bettis Protector on Hopkins Anti-friction Tool Joint.



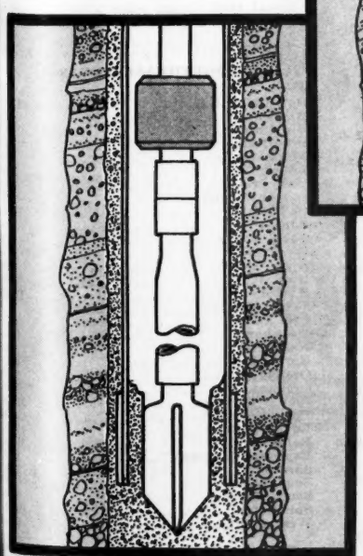
Bettis Protector on perforated liner to center same.



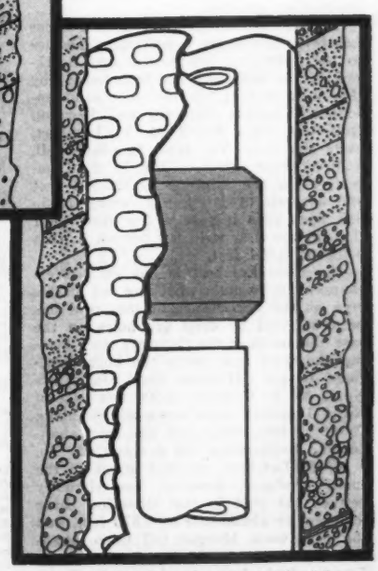
Bettis Drill Stabilizer on drill stem.



Bettis Protector on casing, in cement job to prevent thin walls.



Bettis Drill Stabilizer on stem drilling out cement plug.



Bettis Drill Stabilizer on casing inside of large diameter stove pipe casing.

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Two Wild Wells in the Refugio Field

Both Spraying High Gravity Oil. Drilling Keeping Up Steadily at Barbers Hill and Refugio. Port Neches Failure

By Neil Williams
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., July 7.—Failure to bring Houston Oil Co.'s No. 1 Strauch, which has been blowing out of control since June 25, and a blowout in another well, Moody-Seagraves Producing Co.'s No. 2 O'Brien, gave the Refugio Field two wild wells late in the week. The latter blew out July 3 and like No. 1 Strauch has defied efforts to kill it. Neither well at this time is on fire although both are spraying a high gravity oil of about 70 degrees.

Both these wells are located in the 5,400-5,500-foot deep sand area on the east side of the 3,700-foot field originally developed. The Strauch well, being within the townsite, Block 20, just four blocks from the public square, has created a considerable menace to the town. This is on the west edge of the 5,500-foot line of production. The O'Brien well is some 3,500 feet to the northeast of the Strauch well and on the east side of the string of production.

The O'Brien well, the latest to blow out, is 400 feet east of the company's No. 1 O'Brien, completed during April, flowing 60 bbls. hourly from sand at 5,431 feet. The second well tested salt water in that sand at 5,471 feet was drilling deeper at 5,670 feet at the time of the blowout. The Houston Oil Co. well blew out while trying to set 7-inch casing to test sand at 5,468 feet. Both wells had initial pressures estimated at 2,000 pounds. Efforts to control the Strauch well have been hampered because of the derrick being wrecked.

Extension North

While these wells were the center of interest at Refugio, the main line of production of the 5,500-foot field was extended approximately 500 feet north by Mission Drilling Co.'s No. 1 O'Brien which came in flowing 300 bbls. daily from the sand at 5,471 feet. Near the south end of this production Morgan Oil Corp.'s No. 1 O'Connor came in a dry gas well with 1,550 pounds pressure through a three-eighths-inch choke. When this well is allowed to blow it is likely, as is the case with other Refugio wells, that it will show for oil and increase production steadily.

That Houston Oil Co.'s No. 1 Rose Lambert may prove a redeeming feature to the 5,900-foot production spot northeast of the Refugio Field is indicated by this well picking up the pay sand encountered by the discovery well Houston Gulf Gas Co.'s No. 1 M. F. Lambert, early this year. The Rose Lambert well, a direct west offset to the M. F. Lambert, is in the sand at 5,892-5,901 feet and has cemented 6⅝-inch casing at 5,887 feet. This is just a few feet lower than in the first well, the bottom in that being at 5,884 feet.

The Rose Lambert is one of the few chances left to make anything out of this area as the importance of this pool has been belittled by deep dry holes on the east and south of the discovery well, leaving the west and north the only directions to go. Houston Gulf Gas Co.'s No. 2 M. F. Lambert, 1,500 feet east of No. 1 Lambert, made some oil, swabbing about 15 bbls. daily, but has been abandoned. Independent Oil & Gas Co.'s No. 1 M. F. Lambert, an east offset to the small producer, however, has virtually defined the pool in that direction being temporarily abandoned at 6,375 feet, and the past week Morgan Oil Corp. abandoned as dry at 6,606 feet its No. 1 St. Johns, which, being to the south of the discovery well, and so far the only producer in that sand and area, practically prevents any direct connection of the extension with the main field.

An effort to prove up the deep sand production recently found in the center of the old gas producing area at Refugio by Independent Oil & Gas Co.'s No. 1 Helen Reilly, is being started by this company in the deepening of two former wells, No. 6 Jerry Reilly and No. 1 Shelly. The Helen Reilly, which found production in sand at 5,656-65 feet, was the first deep sand well within the circle of 3,700-foot oil, previous deep development having been on the outside edges of the field.

Union Producing Co.'s No. 4 Morgan-Vance on the northeast edge of the 3,700-foot field was the only other completion reported from Refugio although a half dozen wells were testing at the close of the week. The Morgan-Vance well came in flowing 200 bbls. daily from sand at 3,695 feet.

Port Neches Field

Gulf Production Co. failed to make a well in its No. 1 W. H. Stark, 1,500 feet north of The Texas Company's four producing wells in the Port Neches Field, southwestern Orange County. The well tested salt water in sandy shale at 4,369-89 feet. The hole will be deepened. The Texas Company's No. 2 Stark, approximately 1,000 feet to the west of production, is drilling deeper below 4,300 feet and No. 2 Kuhn, a south offset to the Stark, is at 4,200 feet.

This company also late in the week had not tested its No. 1 McFaddin at Moss Bluff. This well, a north offset to Humble Oil & Refining Co.'s No. 6 Sterling, discovery well of that dome, was coring around 5,800 feet at latest report, being in sandy shale showing oil.

General development in the salt dome territory continued inactive during the week, except at Refugio and Barbers Hill, where drilling keeps up steadily with no let-up in the number of rigs running. There were no important developments at Barbers Hill, with most of the work at present being confined to making hole. Humphreys Corp. late in the week still had not made a well of its No. 2 Scott, a wildcat on the northeast side of the dome. The sand, which is at a total depth of 7,296 feet, was being swabbed, but the oil apparently would not flow. Sun Oil Co. got an 825-bbl. well on the south side of the dome in its No. 5 Chambers County.

Other Completions

At Lockport, Calcasieu Parish, Louisiana, Vacuum Oil Co. got a good well in its No. 26 Miller, which is flowing 800 bbls. daily of pipe line oil through two quarter-inch chokes from sand at 4,386 feet. The well has a pressure of 1,300 feet of gas and is making around 1,000,000 feet of gas daily.

Houtex Oil Co.'s No. 1 Simmons & Brown, North Dayton, Liberty County, finally has been completed after several sidetracking jobs, but is flowing only at the rate of 50 bbls. daily and from sand at 5,183 feet.

Other Gulf Coast completions for the week included Gulf Production Co.'s No. 32 Taylor, south side of Pierce Junction, 700 bbls.; Humble Oil & Refining Co.'s No. 10 Sugarland, DeWalt, 376 bbls.; Humble Oil & Refining Co.'s No. 9 Payne, Raccoon Bend, 279 bbls.; Yount Lee Oil Co.'s No. 1 Greer & Hall, Spindletop, 720 bbls.; the same company's No. 23 fee, Spindletop, 200 bbls., and Republic Production Co.'s No. 66 Dolbear, Hull, pumping 200 bbls. The latter two are former wells worked over.

Daily Average Production

Daily average production of Gulf Coast fields for the week ending July 5 was 204,423 bbls., a decrease of 1,058 bbls. Figures by fields are:

SOUTH LOUISIANA

Anse La Bute	32
Bayou Blue	52
Bayou Bouillon	148
Black Bayou	600
Edgerly	653
Jennings	2,671
Hackberry	4,169
Lake Barre	617
Lake Pelto	154
Lockport	2,461
Port Barre	3,196
Sorrento	39
Starks	450
Sulphur	3,626
Sweet Lake	103
Vinton	4,650
Welsh	137
White Castle	1,236
Total week ending July 5	25,017
Total week ending June 28	25,046
Decrease	29
Total Gulf Coast, July 5	204,423
Total Gulf Coast, June 28	205,481
Decrease	1,058

SOUTHEAST TEXAS

Alien	46
Barbers Hill	18,839
Batson	1,193
Big Creek	4,153
Blue Ridge	1,571
Brenham	146
Boling	1,156
Clay Creek	1,610
Damon Mound	737
DeWalt	12,023
Fannett	1,067
Goose Creek	4,763
Hankamer	3,476
High Island	1,046
Hull	8,869
Humble	15,383
Jasper County	2
Lost Lake	273
Markham	206
Nash	210
North Dayton	2,210
Orange	3,673
Orchard	2,673
Pierce Junction	10,563
Port Neches	1,781
Raccoon Bend	12,010
Refugio	36,446
Esperson (Sheeks)	2,196
Saratoga	1,123
Sour Lake	2,284
South Liberty	4,756
Spindletop	19,210
West Columbia	5,709
Total week ending July 5	179,406
Total week ending June 28	180,432
Decrease	1,026

GULF COAST FIELDS AND WILDCATS

Week Ended July 5

BARBERS HILL—CHAMBERS COUNTY

Mills Bennett Production Co.'s No. 10 Barrow, southwest	Drlg. sandy shale 4,321 ft.
Mills Bennett Production Co.'s No. 3 E. W. Barber, north	Drlg. salt 2,286 ft.
Mills Bennett Production Co.'s No. 3 Gulf-Higgins, southeast	Set 7 joints screen 5,248 ft.
Mills Bennet Prod. Co.'s No. 1 Henry Fisher, southwest	Derrick.
Mills Bennett Production Co.'s No. 2 Fisher, southeast	Coring sand 4,518 ft.
Mills Bennett Production Co.'s No. 2 Wilburn (workover)	Comp. pumping 600 bbls. fluid, 45 per cent water, 5,252 ft.
Humble Oil & Ref. Co.'s No. 6 fee, west	Drlg. shale 4,869 ft.
Humble Oil & Ref. Co.'s No. 7 Mayers fee, west	Rig.
Humphreys Corp.'s No. 1 Fitzgerald, north	Rig.
Humphreys Corp.'s No. 1-B Barber, north	Drlg. rock 1,232 ft.
Humphreys Corp.'s No. 9-A Kirby, northwest	Drlg. sand and lime 3,220 ft.
Humphreys Corp.'s No. 6-A Barber, northwest	Drlg. gumbo 1,453 ft.
Humphreys Corp.'s No. 7-B Kirby, northeast	Derrick.
Humphreys Corp.'s No. 2 Scott	Swabbing 7,296 ft.
Humphreys Corp.'s No. 2-H Kirby (workover)	Drlg. shale 5,761 ft.
Humphreys Corp.'s No. 3-H Kirby (workover)	To pump.
McAlbert Oil Co. No. 1 Woodward (workover)	Set 38-ft. screen 5,347 ft.
McAlbert Oil Co.'s No. 7 Woodward	Drlg. gumbo and lime 3,342 ft.
Rio Bravo Oil Co.'s No. 1 fee, southwest	Location.
Sinclair Oil & Gas Co.'s No. 3 McKinney fee	Drlg. shale 6,544 ft.
Sinclair Oil & Gas Co.'s No. 7 Wilburn, southeast	Drlg. shale and lime 4,914 ft.
Sun Oil Co.'s No. 7 Wilburn fee, southeast	Drlg. shale and lime 2,373 ft.
Sun Oil Co.'s No. 8 Wilburn fee, southeast	Drlg. gumbo 1,946 ft.
Sun Oil Co.'s No. 8 J. Wilburn, southeast	Drlg. shale and lime 2,131 ft.
Sun Oil Co.'s No. 9 J. Wilburn, southeast	Drlg. gumbo 244 ft.
Sun Oil Co.'s No. 5 Chambers, south	Set 25 ft. screen; comp. flowing 825 bbls. oil 4,672 ft.
Sun Oil Co.'s No. 1 O. K. Winfree, west	Drlg. shale and lime 3,703 ft.
The Texas Company's No. 4 Wilburn, southeast	Coring sand and shale showing oil 5,038 ft.
The Texas Company's No. 1 Williams, southwest	Derrick
Yount Lee Oil Co.'s No. 10 Chambers (workover)	Rig up to deepen.
Yount Lee Oil Co.'s No. 4 Phillips, southeast	Drlg. oil sand 5,136 ft.
Yount Lee Oil Co.'s No. 7 Woodward, southeast	To pump 5,246 ft.
Yount Lee Oil Co.'s No. 8 Woodward, southeast	Rigging up.
Yount Lee Oil Co.'s No. 2 Zadie Fisher, southwest	Drlg. shale and lime 4,930 ft.
Yount Lee Oil Co.'s No. 5 Richardson, southwest	Drlg. hard sand and lime 4,622 ft.

RACCOON BEND—AUSTIN COUNTY

Humble & Valley's No. 5 Bellville	Drlg. sandy shale and lime 1,308 ft.
Humble & Valley's No. 1 Brown	Drlg. shale sand 3,633 ft.
Humble & Valley's No. 3 Buchanan	Derrick.
Humble & Valley's No. 1-B Hardy (Waller County)	Standing 3,751 ft.
Humble & Valley's No. 2-B Hardy	Derrick.
Humble & Valley's No. 7 Payne	Derrick.
Humble & Valley's No. 8 Payne	Derrick.
Humble & Valley's No. 9 Payne	Comp. flowing 279 bbls. 3,446 ft.
Humble & Valley's No. 2 Sherrod	Derrick.
Humble & Valley's No. 7 Urban	Shut down 1,165 ft.
Humble & Valley's No. 6 Woodley	Derrick.
Humble & Valley's No. 7 Woodley	Derrick.
Humble & Valley's No. 8 Woodley	Derrick.
Humble & Valley's No. 9 Woodley	Derrick.

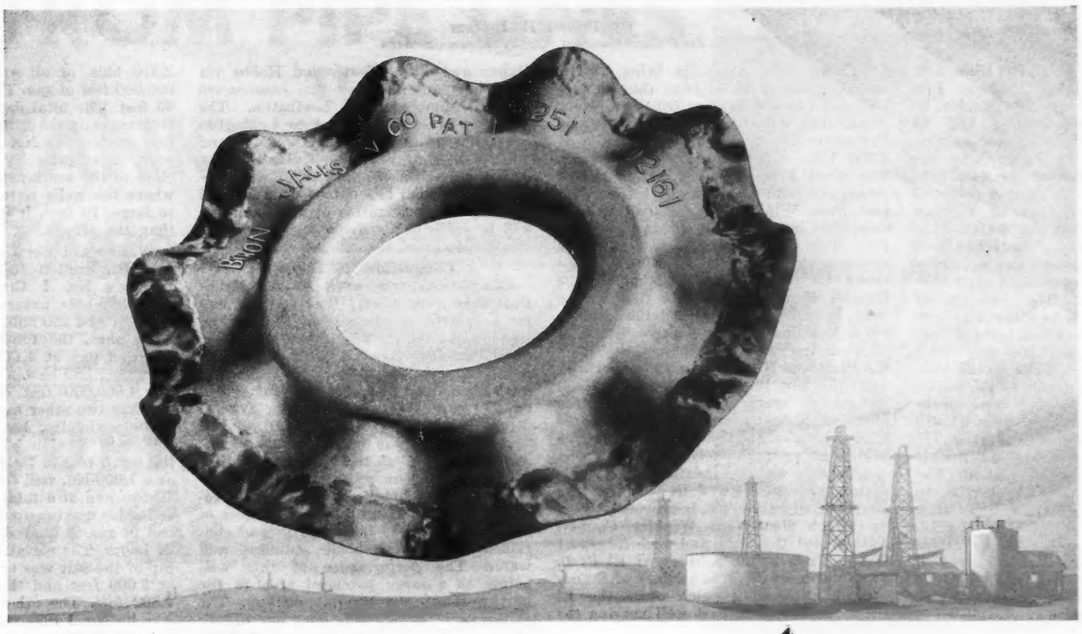
DEWALT—FORT BEND COUNTY

Humble Oil & Ref. Co.'s No. 10 Sugarland	Comp. flowing 376 bbls. oil 3,533 ft.
Humble Oil & Ref. Co.'s No. 15 Brazos	Drlg. shale lime 2,642 ft.

HUMBLE—HARRIS COUNTY

Benedum & Trees' No. 1 Foley, south	Total depth 8,181 ft.; drill stem stuck.
Dunbar & Deering's No. 1 Bennett, northwest	Comp. flowing 350 bbls. 4,038 ft.
Houtex Oil Co.'s No. 1 Hirsch, northwest	No report.
Rio Bravo Oil Co.'s No. 1 fee, west	No report.
Rio Bravo Oil Co.'s No. 2 fee, west	No report.
Rio Bravo Oil Co.'s No. 1 R&W.T., west	Derrick.
South Texas Pet. Co.'s No. 4 Lee, south	Drlg. sand showing oil 4,824 ft.
South Texas Pet. Co.'s No. 15 Morris, south	Drlg. gumbo 450 ft.
Sun Oil Co.'s No. 9 Bender, west	Location.
Sun Oil Co.'s No. 7 Bender, west	No report.

(Continued on Page 123)



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Nine New Locations Made at Hobbs

Thirty-Nine Wells Drilling, 16 Completed as Producers, Indicating Potential Production of Over 50,000 Bbls.

By Tolbert R. Ingram
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., July 7.—Nine new locations in the Hobbs Pool in Lea County, New Mexico, 39 wells drilling and 16 wells completed as producers indicate the status of the new field at this time. A potential production of between 50,000 and 60,000 bbls. a day already has been developed and a number of wells are close to the pay. The problem of whether the field shall be allowed to produce or put on a proration basis still is up in the air. The Shell Petroleum Corp.'s No. 1 McKinley, which made 10,124 bbls. the first 24 hours, is a mile to the northwest of the nearest producer and means that big wells may be expected still farther in that direction. The Ohio Oil Co. had a 7,000-bbl. well and the Prairie Oil & Gas Co. had three completions. The Eunice area in Lea County is showing an increase in activity and George F. Getty, Inc., made a location in that district, bringing the total number of operations up to five. Eddy County had a small completion and a good show of oil in a wildcat in McKinley County was reported and a small gas well was completed in San Juan County.

The opening of a new gas horizon in the lower Mesa Verde on the Bell Rock Dome in northwestern Colorado by the Midwest Refining Co. is attracting considerable attention and much leasing is under way. The well is reported showing some oil below the gas. One completion was reported on the Iles Dome and one new operation got under way in Fremont County.

The Oregon Basin structure in Park County, Wyoming, where more than 2,000 acres on the two domes has been withheld from development, is to be opened as a result of the settlement of a title controversy involving some of the tracts and an announcement that the Government will offer leases on 1,320 acres at auction. The Midwest's test to the granite in Salt Creek has shut off a big flow of water in the Madison. There were only two completions in Wyoming, both small wells.

NEW MEXICO

Hobbs Area—Lea County

With 16 wells completed, capable of producing between 50,000 and 60,000 bbls. of oil per day if opened to capacity, 39 wells drilling and 9 new locations announced this week, the Hobbs Pool in Lea County continues to make rapid progress towards the approaching crisis. Whether there is to be a conservation and proration program put into effect, or all restrictions done away with and the pool allowed to produce a flood of oil, remains uncertain at this writing and most of the operators are preparing for any emergency. Almost all of the wells drilling, with a possible exception of one or two in the southeastern end, are in what is considered proven territory and a number are offsets to big wells. Most all locations are 330 feet back from the lease lines, but near the center of the field the operators are beginning to adopt the policy of going back 660 feet where this is possible. If this policy grows in effect, it will lessen the number of required offsets, but the number of wells already drilling 330 feet from lot lines is considerably in excess of those spotted in the center of forties.

The pipe line situation is improving with the completion of the Atlantic Pipe Line Co.'s 79-mile 8-inch line from the Midland, Tex., tank farm to Hobbs, which is getting the finishing touches, and which will begin running oil within a few days. This company has three 55,000-bbl. tanks at Hobbs into which is being run a limited quantity of oil from the Midwest Refining Co. and Walker Oil Corp. wells. It also has a contract with the Amerada Petroleum Corp. to run a maximum of 7,500 bbls. a day up to 3,000,000 bbls. The Shell Pipe Line Co.'s line from a connection with the Texas Pipe Line Co.'s line from Winkler to Jal also will be completed into the field within a week or two. This company's storage is being supplemented by three 55,000-bbl. bolted tanks moved in from Oklahoma. The Humble Pipe Line Co., the first in the field, in addition to running the Humble Oil & Refining Co.'s production, is taking oil from the Shell Petroleum Corp.'s No. 1-A State and No. 1 McKinley temporarily until the new line is finished. The Shell line may be operated by gravity until the pumping plant is completed. The three lines will give the field a pipe line capacity of approximately 60,000 bbls. a day, which will be insufficient if it is opened up and allowed to produce. The Paso-Tex Pipe Line Co. is reported laying an 8-inch line from Winkler County, Texas, into the field and will transport Hobbs crude to the refinery at El Paso. The California Co., a subsidiary of Standard of California, which owns the El Paso plant, has its first well nearing the pay in the Hobbs Pool.

Hobbs isolation is being remedied as fast as possible and the district now has airplane connections with Roswell, Amarillo, Midland and Tulsa. Operators have been conferring with officials of the Texas & Pacific Railroad looking to an improved passenger service between Dallas and Fort Worth and Hobbs via Monohans and the new line constructed between Monohans and Lovington. The new line was completed into Lovington the past week. It goes through Hobbs and other Lea County oil fields. Decision by Texas & Pacific officials as to what action it will take has not been announced pending an investigation of whether there will be sufficient business to warrant the establishment of through service.

Completions in Hobbs

Completions this week in the Hobbs Pool show very clearly that no limit can yet be placed on the size of the productive area of the field or of the wells. The Shell Petroleum Corp.'s No. 1 McKinley, SW cor., Section 19-18-38, the farthest to the northwest of any well so far drilled to the pay, was completed at a total depth of 4,210 feet and is a 10,000-bbl. well. The pay was found at 4,005-4,210 feet and it flowed 10,124 bbls. the first 24 hours. It is on production and is averaging 8,000 bbls. a day on a three-fourths inch choke and 10,500,000 feet of gas. The oil tested 36.5 gravity and contained 6 per cent basic sediment and water. The performance of this well points to a large potential area to the northwest of the present drilling. The elevation is 3,662 feet. The top of the salt was at 1,580 feet, the base at 2,727 feet and top of the brown lime at 2,785 feet. Five and one-half miles to the southeast of the Shell well, the Prairie Oil & Gas Co.'s No. 1 Crump, NW cor. NE, Section 15-19-38, was completed at 4,145 feet and was shut in after being gauged for 11 hours in which it made 2,270 bbls. of oil and 8,000,000 to 10,000,000 feet of gas. The pay was at 4,140-45 feet. The total depth of the two wells is practically the same based on sea level datum. Prairie's No. 1 Crump, was, however, a surprise as it was considered close to the southeastern edge of the pool where the wells were not expected to be so large. In fact, it is a much better well than the offsets.

Walker Oil Corp.'s No. 2 Terry, SW cor. SE, Section 10-19-38, which offsets Prairie's No. 1 Crump on the north, made 257 bbls. natural first 24 hours, being shot and 450 bbls. first 24 hours after being shot, the total depth being 4,190 feet and pay at 4,110-90 feet. It is now averaging 389 bbls. a day. It is also making 4,000,000 feet of gas. The Prairie also has two other completions in this immediate vicinity. Its No. 2 Crump, SW NW NE, Section 15-19-38, an offset on the south to No. 1 Crump, was completed as a 1,000-bbl. well from the pay at 4,137-46 feet and at a total depth of 4,172 feet. It is also making approximately 5,000,000 feet of gas. It flowed 1,080 bbls. the first 24 hours. The elevation is 3,592 feet, the top of the salt was at 1,690 feet, the base at 2,690 feet and the top of the lime at 2,892 feet. The other Prairie completion was its No. 1 Selman, NW SW NE, Section 15-19-38, one location south of its No. 2 Crump, and one of the series of offsets down the center of the section, and the farthest south. It is rated as a 600-bbl. well of 36 gravity oil from the pay at 4,153-77 feet. It made 613 bbls. the first 24 hours and 4,000,000 feet of gas. Its elevation is 3,602 feet, top of the salt was at 1,704 feet, the base at 2,615 feet and top of the lime at 2,897 feet. It is also an offset on the east to Midwest Refining Co.'s No. 24 Leach, NE SE SW, Section 15, completed about a year ago with an average initial production of 430 bbls. a day.

Another Good Well

The Ohio Oil Co. and the Independent Oil & Gas Co. have a good well in their No. 1 State-Northrup, NE NW SE, Section 32-18-38, 2½ miles southeast of the Shell's No. 1 McKinley, and 3 miles northwest of the Prairie's group of completions. It is an offset on the south to the Shell Petroleum Corp.'s No. 1 State. The Ohio's State-Northrup is bottomed at 4,175 feet. It came in flowing 175 bbls. an hour through 3-inch tubing with 200 pounds pressure on the tubing and 1,100 pounds on the casing. It made 300 bbls. an hour open flow on a short test, but it had not cleaned itself and showed about the usual amount of sediment and water. On June 27 it was given another test and produced at the rate of 7,000 bbls. a day, flowing 525 bbls. the first hour and 386 bbls. the second hour. The top of the pay was at 4,011 feet and the oil is 36 gravity. Shell's No. 1 State, SE SW NE, Section 32-18-38, the offset on the north to the Ohio's well, blew in three weeks ago when it lost its circulation. It was finally mudded and deepened to 4,175 feet where it was completed and is producing through tubing. It was allowed to flow two days into the sump to clean itself and in the first 16 hours it gauged 1,891 bbls. with a 1-inch choke on the tubing and a three-fourths inch choke on the casing. If opened up, it is believed the well would make around 10,000 bbls. a day.

Amerada Petroleum Corp.'s No. 1-A State, SW NW NE, Section 32-18-38, a fourth of a mile to the northwest of the Shell well, gauged 30,000,000 feet of gas a day at 3,130 feet and is drilling ahead at 3,288 feet. The upper gas and oil pays in the Hobbs Pool are being passed up by the operators to go down to the big pay

(Continued on Page 107)

GOOD PRODUCER IN RED COULEE; UNEXPECTED SHOW IN SUNBURST

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, July 5.—Completion of Southern Alberta Exploration Co.'s No. 1, LSD 8, Section 3-1-16w4, has added another good producer to the Alberta end of the international Red Coulee Field. On the same end of the structure, Capitol Oil & Gas Co.'s No. 1, LSD 3, Section 21-1-16w4, got an unexpected oil show in the Sunburst sand; while on the Montana end several tests are close to production. Completion of the "Sax" well makes a total of 10 producing wells for this field, six in Montana and four in Alberta.

Southern Alberta Exploration Co.'s No. 1, located a half mile east of Alberta Pacific Consolidated's No. 1 producer, encountered gas at 2,415 feet and after cementing deepened to get the oil sand at 2,430 feet. Initial production around 75 bbls. was looked for but the well gradually drilled itself in, oil rising 1,400 feet or more in the hole and steady bailing failing to lower it. Southern Alberta Exploration Co. was organized last winter by Lethbridge and Winnipeg men. Officers are: President, W. S. Newton; vice president, P. H. Gayner; secretary-treasurer, J. V. Nutter; directors, J. S. Klema, W. H. Johnson, A. J. Andrews, J. A. Machray, Charles B. Becher, all of Winnipeg; and Dr. R. N. W. Shillington and S. J. Shephard of Lethbridge. Test was spudded in April 7. Production is estimated at 200 bbls. a day or better, making it the best well yet drilled on the Alberta end of the structure. The strike extends the field half a mile east on the Canadian side, and indicates that Commonwealth's No. 1 and Dalco's No. 1, which proved dry in the Ellis sand, were drilled on a fault. It is reported Alberta Pacific Consolidated's No. 2 will be started at once as an offset. Southern Alberta's No. 2 will probably be started this month.

Capitol Oil & Gas Co.'s No. 1, LSD 3, Section 21-1-16w4, north of the Vanalta producers got a surprise strike of crude oil in the Sunburst sand between 2,498 and 2,505 feet. A production of 25 bbls. of 38 gravity crude, the highest grade yet found in the Red Coulee Field, is claimed. Test is deepening to the Vanalta sand, looked for around 2,630 feet. The strike indicates an extension of the field about 3 miles north and west.

Vanalta Oils' No. 1 producer, Section 4-1-16w4, which has been pumping around 40 bbls. from the top of the Vanalta sand was deepened 17 feet and is reported flowing 240 bbls. It is probable Vanalta's No. 2 and Alberta Pacific's No. 1 will also be deepened.

In the northeast section, where Dalco Oil & Gas Co.'s No. 1, LSD 4, Section 11-1-16w4, has been shut down at 2,615 feet and Commonwealth Petroleum's No. 1, LSD 10, Section 3-1-16w4, finished dry at around 2,770 feet, arrangements have been made for deepening Dalco's No. 1 for a thorough test. At 2,615 feet the test is at the Ellis-Madison contact. It will be the first deep test in the field. Dalco Oil & Gas Co.'s No. 2, LSD 7, Section 19-2-17w4, is reported spudded in.

On the Montana end, Mid-Continent

(Continued on Page 129)

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CONTINENTAL

Playa Del Rey Gets Biggest Producer

Venice Oil Syndicate Well Flowing 4,760 Bbls. of Oil and 3,100,000 Feet of Gas Daily From Deep Recreation Zone

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., July 5.—The past week was an exceptional one from a development standpoint as drilling operations resulted in the completion of several substantial producing wells in a number of fields. The Venice Oil Syndicate focused the attention of operators on the Playa Del Rey Field of Los Angeles Basin by bringing in No. 1 Venice flowing 4,760 bbls. of 23.6 gravity oil and 3,100,000 feet of natural gas per day from the deep Recreation zone at 6,093 feet. This new well, located approximately 900 feet southwest of the discovery well, is the largest producer to be finished in the Playa Del Rey Field up to the present time. It is approximately 90 feet higher structurally than the discovery well and, while this factor naturally assured larger production, the initial of this new producer exceeded even the most optimistic expectations. The oil from this new well is being handled by the Del Rey Oil & Refining Co., which has contracted to purchase the oil at market price. In the absence of pipe line facilities, the oil is being transported in a fleet of trucks and trailers to the General Petroleum's tank farm at Torrance, where temporary tankage facilities have been leased.

The completion of this new large well by the Venice Oil Syndicate has stimulated efforts to formulate a definite curtailment program for Playa Del Rey in order that the production of this field may be restricted in conformity with similar curtailment work prevailing in other areas. Umpire Neal Anderson and A. T. Jergins, chairman of the Long Beach Operators Committee, who are charged with the responsibility of securing ratification of the curtailment program involving Playa Del Rey, are apparently not meeting with as cordial reception as anticipated. Operators are holding off for some reason or other, possibly in the hope that they escape the obligation of curtailing production, as has been done in other fields throughout the State.

Price at Stake

It is quite obvious that unless operators ratify the existing curtailment program which, under present plans, runs through until November 1, 1930, Playa Del Rey oil will not command a price commensurate with its intrinsic value. As the situation stands at the present time, two of the major companies will lay pipe lines into this field and publish a posted price for crude oil as soon as the curtailment program is ratified. This should be sufficient inducement to secure immediate ratification because it is evident that considerable difficulty will be experienced in disposing of maximum production unless some of the larger companies step in and purchase current production. In other words, independent refiners could not possibly handle anticipated field production so that operators must look to the major companies for relief. This relief may not be forthcoming unless some means are found to curtail production. Another factor which should advance ratification is the rather inferior quality of oil produced. Because of its rather high sulphur content, this oil requires special treatment and is therefore not particularly desirable from a refining standpoint.

As daily production increases at Playa Del Rey, the necessity of curtailment will become more evident. Operators should not hesistate too long because if this field gets out of hand it may be too late to promulgate a satisfactory measure of curtailment which is absolutely necessary to establish and maintain a satisfactory price for the oil in question. If Playa Del Rey yielded a sweet crude oil operators could anticipate a much larger demand and a consequent larger outlet for production. The sour oil produced, however, will probably not prove much of an inducement to independent refiners unless it can be purchased at low prices, which would obviously be to the disadvantage of the producer. If Playa Del Rey operators choose to play a lone hand, this field may ultimately jeopardize the entire curtailment program and result in subsequent price cuts. It is quite obvious that if sweet refining oil produced in other fields is reduced in price production at Playa Del Rey, because of its inferior quality, will be selling at an extremely low figure. The major companies are naturally quite anxious to have Playa Del Rey operators ratify the existing curtailment program as they are desirous of evidencing their good faith to operators who have curtailed production by maintaining a higher price schedule than could otherwise be sustained without curtailment. In other words, the larger companies have been making a special effort to compensate producers by favorable prices which more than offsets the value of oil curtailed.

May Prove Costly

Umpire Anderson and Chairman Jergins have been working industriously on the situation at Playa Del Rey and, while both are highly optimistic over the outcome, a check indicates that there are several operators at Playa Del Rey who have consistently refused to effect curtailment of production in other fields. If these operators maintain this policy in their operations at Playa Del Rey it may ultimately prove costly. It must be evident to all operators who have given the situation any thought that some of the larger companies have just about come to the conclusion that it is useless to continue sponsoring curtailment work unless a more effective means is found to secure co-operation. This is especially true at the present time in view of the demoralization existing in the refined oil market as the posted price for crude oil is entirely out of line with the prevailing price structure for refined oils. With gasoline retailing in Los Angeles territory at 12½ cents per gallon, including the reseller's 4-cent differential and a 3-cent road tax, it does not take a mathematician to see that refiners are losing money, especially with 30 gravity Southern California crude oil commanding a price of $1.50 per barrel.

Readjustment Coming

A readjustment must ultimately be made in either crude or refined oil prices, in which event it is not at all improbable that there may be a drastic reduction in crude oil price schedules if the situation at Playa Del Rey gets beyond control due to the inability of the committee to secure endorsement of the general curtailment program. If this oil is dumped on the market and causes any further demoralization in refined oil prices, the entire price structure must come tumbling down, notwithstanding the concerted efforts of major companies to compensate operators in other fields who are making a determined effort to effect general stabilization. This is of special importance because over a period of time the price of crude oil is dependent upon the price of gasoline. Sometimes conditions exist where this deduction does not apply, but this disparity can be attributed to competitive conditions and not to economics.

It is quite probable that after a little further thought, Playa Del Rey operators will recognize the advisability of effecting curtailment similar to that undertaken in other fields. It is imperative that operators at Playa Del Rey secure the highest possible price for crude oil in order that they may be able to liquidate drilling and development costs at the earliest moment because many of the wells which will be drilled on town lots will never pay out. This deduction is made in spite of the fact that the Venice Oil Syndicate's recent completion came in flowing better than 4,000 bbls. per day and that other subsequent completions can also be expected to register similar high initial production. This factor should be given serious thought when considering the proposed curtailment agreement as the deep Recreation zone, in the light of recent developments, has a definite limited thickness of oil sand. Previous expericence has indicated that a 100-foot oil sand will not sustain intensive town lot development from an economic standpoint, especially if crude oil prices are low.

It should also be remembered that when the deep Recreation zone becomes depleted the story is ended because there are no deeper zones below this horizon since the Recreation zone rests directly on top of the schist or basement complex, which precludes any further deeper accumulation. It has been fairly well established that the shallow Del Rey sand encountered on top of the structure around 3,500 feet is of Pliocene age and that the Recreation zone, picked up just above the 6,000-foot level, is of Miocene age. None of the wells finished in the Playa Del Rey Field up to the present time has revealed the existence of more than 100 feet of solid oil sand and, while subsequent drilling may change the outlook as wells are drilled nearer the axis of the structure, this does not seem highly probable. In addition to the Venice Oil Syndicate's new well finished during the past week, the Ohio Oil Co. successfully completed No. 1 Brown, a new well which registered an initial daily production of 260 bbls. of 25.1 gravity oil from the deep Recreation zone at 6,057 feet, the hole having been finished with a 6⅝-inch liner carrying 100 feet of perforated. The Ohio also recompleted No. 2 Dickinson on the beam pumping 235 bbls. of clean 24.1 gravity oil per day from 6,324 feet. This well came in under a natural flow a short time ago but failed to hold up. The Deuel Petroleum Co.'s No. 1 Venice also died recently and is at the present time being cleaned out to bottom, 6,142 feet. The Santa Fe Springs Oil Co.'s No. 1 Venice staged a short gas blowout at 6,045 feet but notwithstanding this demonstration the company has not yet succeeded in putting it on steady production although it has been bailed and swabbed at frequent intervals for several days. This project is an offset to the Ohio's No. 1 Brown, a 250-bbl. well from approximately the same depth.

Long Beach

The past week was an exceptionally successful one as far as drilling operations are concerned at Long Beach as several substantial producers were put on production during this period. The McKeon Oil Co. topped the list when No. 7 Signal built up to 4,700 bbls. per day. This new well, the largest completion to be listed in the Long Beach Field for several years, came in flowing 1,760 bbls. of 29.1 gravity oil per day, but subsequently built up to the maximum reached four days after completion. It is located in the southeastern part of the field and was finished with a 6⅝-inch liner carrying 1,240 feet of perforated landed on bottom at 6,959 feet. The Petroleum Securities also chalked up a satisfactory completion during the past week when No. 1 Painted Hills was brought in under a natural flow doing 1,791 bbls. of clean 29.2 gravity oil per day from 6,959 feet, the hole having been finished with a 6⅝-inch oil string carrying 1,297 feet of perforated. Both of these projects are located in the eastern end of the field where a number of substantial producers have been completed during the past several months. The completion of No. 7 Signal of the McKeon Oil Co. and No. 1 Painted Hills of the Petroleum Securities has revived interest in this section of the field with the result that several new wells are already getting under way. One of these new projects, located by the Magna Corp., will be drilled on what is thought to be perhaps the smallest drilling site in California. This new well will be drilled on a triangular piece that measures 30 feet on one side, 41 feet on another and 46 feet across the base.

The James Oil Co.'s No. 4 Signal, which came in as a gasser about 10 days

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Crude oil	.....	.....	.....	.....	68,690	566,045
Fuel oil	.....	.....	.....	.....	71,950	49,950
Diesel and gas oil	.....	.....	.....	.....	1,919,152	913,200
Gasoline	723,657	103,380	648,089	92,584	9,140,266	10,374,999
Naphtha distillate	.....	.....	.....	.....	.....	81,750
Coastwise—						
Crude oil	459,571	65,653	235,040	33,577	7,704,806	11,427,709
Fuel oil	316,045	45,149	106,603	15,229	8,552,345	10,882,958
Diesel and gas oil	135,329	19,333	10,943	1,563	1,005,612	693,340
Gasoline	367,043	52,435	275,785	39,398	5,930,300	5,246,597
Kerosene	25,325	3,632	.....	.....	96,822	34,972
Exports—						
Crude oil	140,250	20,036	192,355	27,465	3,265,598	2,562,252
Fuel oil	474,441	67,777	403,561	57,652	9,412,266	9,227,881
Diesel and gas oil	7,693	1,099	153,712	21,959	2,330,687	1,453,910
Gasoline	618,890	77,413	311,152	44,450	8,042,154	5,405,708
Kerosene	201,500	28,786	10,260	1,466	2,046,931	1,462,980
Lubricants	.....	.....	.....	.....	10,082	.....

TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC AND GULF COAST PORTS

Diesel and gas oil	.....	.....	.....	.....	88,280	.....
Gasoline	.....	.....	.....	.....	641,680	1,050,732
Lubricants	.....	.....	.....	.....	5,866	.....
Coastwise—						
Fuel oil	.....	.....	106,673	15,239	1,815,106	1,233,221
Diesel and gas oil	.....	.....	.....	.....	152,544	289,770
Gasoline	75,903	10,843	32,460	4,637	2,006,148	2,390,195
Kerosene	5,991	856	.....	.....	125,378	53,460
Exports—						
Crude oil	.....	.....	.....	.....	3,075	121,603
Fuel oil	.....	.....	.....	.....	481,000	256,039
Diesel and gas oil	.....	.....	.....	.....	231,990	155,474
Gasoline	266,127	38,018	.....	.....	2,213,023	2,937,649
Kerosene	8,077	1,154	.....	.....	377,591	382,417
Lubricants	.....	.....	.....	.....	18,672	21,899

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ago flowing 14,000,000 feet of natural gas per day from 7,100 feet, has begun making some oil and the present production, approximating 215 bbls. of clean 35.2 gravity oil, will probably be greatly increased as soon as the volume of gas declines. This well blew in prematurely with 5,000 feet of 2½-inch drill pipe in the hole. The well was a former upper zone producer which was redrilled and deepened to 7,100 feet. The Ring Petroleum also recompleted a former upper zone producer in the Long Beach Field this week when No. 5-A, located on fee owned property, was returned to production flowing 660 bbls. per day from 6,800 feet. This well showed a rather high water cut and it was killed subsequent to completion and recemented. Completions in the Long Beach Field during the past week were considerably more numerous than the general average but a check indicates the possibility that 15 or 20 new wells will be completed before the close of the current month.

Santa Fe Springs

The Union Oil Co. headed the completion list at Santa Fe Springs during the current week when it put three wells on production which showed an aggregate initial daily output of 3,960 bbls. The best of this trio was No. 41 Bell, which came in about 10 days ago flowing 963 bbls. per day from 6,845 feet. It failed to hold up, however, with the result that a compressor was installed to stimulate production. As a result of this additional equipment, No. 41 Bell was recompleted doing 2,475 bbls. per day. The potentiality of the dormant Meyer zone was revealed when No. 56 Bell, a new well, was brought in flowing 830 bbls. of 29.6 gravity oil initially from 4,500 feet, the hole having been finished with an 8⅝-inch liner carrying 300 feet of perforated. The completion of this well indicates that the Union and General Petroleum have a considerable reserve in the Meyer zone due to wide spacing of wells and consistent repressuring operations carried on by both concerns. In the town lot area and at other points throughout the field, production possibilities in this zone are not as satisfactory due to less favorable conditions and the failure to reinject surplus natural gas from the lower zones.

No. 23 Farwell, the smallest of the Union's current weekly completions, was finished in the deep Clarke zone doing 655 bbls. per day, the oil being clean and testing 34.1 degrees. This new well was bottomed at 7,930 feet and finished with a 4¾-inch liner carrying 622 feet of perforated. George F. Getty increased his current production 1,750 bbls. per day when No. 20-A, bottomed at 8,000 feet, blew in prematurely while the crew was redrilling the hole at 5,051 feet. The Bellview Oil Syndicate also added a new well to its list of producers when No. 5 Grohs, a new well, was completed flowing 728 bbls. from 5,053 feet. In the Rosecrans Field of Los Angeles Basin, the Union completed No. 3 Chandler, a new well, doing 298 bbls. per day from 5,225 feet, the hole having been finished with a 4¾-inch liner carrying 493 feet of perforated. In the West Coyote Field, the Standard finished No. 46 Emery pumping 366 bbls. of 29.9 gravity oil daily from 4,088 feet. At Seal Beach the Continental Oil Co. failed to secure a natural flow when No. 33 Bixby, a new well finished at 5,000 feet, but it proved good for 465 bbls. of clean 30.1 gravity oil when put on a compressor. The Superior Oil Co. is abandoning its well No. 64, a deep test in the Torrance Field in schist at 5,934 feet. The abandonment of this well is believed to prove conclusively the absence of a deeper zone and definitely removes Torrance as a possible factor in future production, as schist has now been encountered in all four sections of the field.

Elwood

The Elwood Exploration Co., a subsidiary of the Honolulu Consolidated, successfully completed well No. 3 on tideland drilling permit No. 90 in the Elwood Field of Santa Barbara County, and this new well, swabbed in on a compressor, is flowing 1,620 bbls. of clean 36.1 gravity oil per day from 3,298 feet. In addition to putting this well on production, the Elwood Exploration cemented well No. 4 at 3,294 feet and instituted preparations to complete it in the near future. Several other potential producers are under way in the Elwood Field at the present time and additional completions may be anticipated during the reminder of the current month. In the Ventura Avenue Field, the Shell successfully finished No. 55 Taylor doing 470 bbls. of 29.9 gravity oil initially from the shallow sand at 4,016 feet and a check indicates the probable completion of several additional producers in the near future. The Shell spudded in No. 58 Taylor and is rigging three additional wells on this lease for immediate spud. The Associated, which should have No. 9-A Ventura Land & Water and No. 15 Hartman on production shortly, spudded in three new wells on the Lloyd property and will probably start work on additional projects from time to time during the next 90 days.

Midway-Sunset

There was only one new well finished in the Midway-Sunset Field of Kern County during the past week and in view of the limited amount of development work under way future completions will probably likewise be rather infrequent. The new producer added this week was the Chanslor-Canfield Midway Oil Co.'s No. 9 which was good for 120 bbls. per

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FOUR COMPLETIONS IN MT. PLEASANT; STATE PRODUCTION SLIGHTLY UP

By Paul A. Elliott

MUSKEGON, Mich., July 7.—Four Pure Oil Co. wells, for which four successive state permits were granted during the last week in January, came in this week as Dundee oil producers in the Mount Pleasant Field. These were the only new completions and together added more than 600 bbls. of initial production, although three were edge wells located in Section 1, Chippewa Township, Isabella County. The John B. Rayner C-2 and C-3 wells, located on the same Pure lease in Section 1, made 265 bbls., respectively. The Pure Oil Co.'s Iosco Land Co. B-2, SW SE SW Section 1-14n-3w, Chippewa Township, was brought in as a 50-bbl. initial producer, although it had to be swabbed. No. 3 Lewis Thompson, NW NW NW Section 12-14n-3w, Chippewa Township, also made a 50-bbl. initial producer.

Interest now centers in the recent new wildcat strike near the village of Leaton, where operators are watching the Gibson, Johnson & Borden, Inc.'s No. 1 Lucius Cole, NW NE SW Section 19-15n-3w, Denver Township, Isabella County, which may be the second well to drill into the Dundee formation near Leaton. The well is about half a mile west of the New York Petroleum Royalty Corp.'s No. 1 P. J. Marthey, SW SW SE Section 19-15n-3w, the discovery well. The Cole well had a flow of about 1,000,000 feet of gas in the Marshall formation, which was mudded off to crry the well to the Dundee. The Marthey well, which came in nearly three weeks ago as a 540-bbl. initial producer, continues to flow about 350 bbls. as the largest wildcat brought in since the discovery of oil in paying quantities in 1925 near Saginaw.

Seven rigs are drilling near Leaton and two others will start drilling soon. More than 10 permits for new wells have been issued.

Production Increases

Average daily production of the Mount Pleasant Field, as well as the Muskegon Field, has shown a slight increase during the first few days of July. The Mount

(Continued on Page 131)

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well, location—	S-T-R	Depth	Status
Union, No. 1 Orchard Dale, Los Angeles Co.	10- 3-11	1,750	sd. sh. drilling
Clearwater Oil Co., No. 1 Bellflower, Los Angeles Co.	21- 3-12	5,780	suspended
Burlingham Pet., No. 1 Compton, Los Angeles Co.	17- 3-13	3,960	sd. sh. drilling
Crimson Pet., No. 1 Compton, Los Angeles Co.	22- 3-13	130	suspended
Francis, Don., No. 1 Compton, Los Angeles Co.	8- 3-13	460	sd. sh. drilling
Ohio, No. 1 Moneta, Los Angeles Co.	35- 3-14	6,400	hd. sd. drilling
Guajome Oil Co., No. 1 El Nido, Los Angeles Co.	33- 3-14	mtl.	building rig
Cal. Ventura Oil Co., No. 1 Manhattan, Los Angeles Co.	30- 3-14	6,525	suspended
Cal. Ventura Oil Co., No. 1 Hermosa, Los Angeles Co.	31- 3-14	1,820	sd. sh. drilling
McMahon & McDonald, No. 1 Watts, Los Angeles Co.	12- 3-14	4,200	hd. sd. drilling
Tri-State Oil Co., No. 1 Watts, Los Angeles Co.	12- 3-14	1,112	sd. sh. drilling
Rio Grande Oil Co., No. 1 Watson, Los Angeles Co.	17- 4-13	5,639	hd. sd. drilling
Shell, No. 1 Van Nuys, Los Angeles Co.	19- 2-15	3,410	sd. sh. drilling
Anchor Oil Co., No. 1 Puente, Los Angeles Co.	19- 2-10	4,820	suspended
Rio Hondo Pet., No. 1 Puente, Los Angeles Co.	14- 2-10	2,162	sd. sh. drilling
Rucker, R. C., No. 1 Puente, Los Angeles Co.	27- 2-10	3,660	suspended
Bardeen Pet., No. 1 Puente, Los Angeles Co.	9- 2-10	1,140	hd. sd. drilling
Sherman, J. W., No. 1 Puente, Los Angeles Co.	33- 2- 8	850	suspended
Keck & Hall, No. 1 Puente, Los Angeles Co.	32- 2- 8	1,120	shut in
Marcel Pet. Co., No. 1 Puente, Los Angeles Co.	31- 2- 8	2,548	suspended
Los Gatos Oil Co., No. 1 El Monte, Los Angeles Co.	16- 1-11	1,950	suspended
Olympic Corp., No. 1 Calabasas, Los Angeles Co.	18- 1-17	5,250	sd. sh. drilling
Consolidated Oil Co., No. 1 Newhall, Los Angeles Co.	8- 3-16	2,025	cleaning out
Pioneer Pet., No. 1 Newhall, Los Angeles Co.	14- 3-16	2,328	suspended
Union, No. 1 Coyote, Sansinena, Los Angeles Co.	30- 2-10	3,671	redrilling
Tureco Oil Co., No. 1 Whittier, Los Angeles Co.	29- 2-11	5,081	sd. sh. drilling
Western Gulf, No. 1 Brea Canyon, Los Angeles Co.	28- 2- 9	5,895	hd. sd. drilling
Standard, No. 1 Bastanchury, Coyote, Orange Co.	21- 3-10	5,851	testing
Graham & Loftus, No. 1 Coyote, Orange Co.	18- 3- 9	4,800	sd. sh. drilling
Mesa Pet., No. 1 Newport, Orange Co.	21- 6-10	4,910	suspended
Hall, H. L., No. 1 Newport, Orange Co.	20- 6-10	790	suspended
Standard, No. 1 Newport, Orange Co.	26- 6-10	1,014	redrilling
Fidelity Pet. Co., No. 1-A Murrietta, Riverside Co.	23- 7- 3	701	cleaning out
Hemet Pet. Co., No. 1 Ward, Riverside Co.	9- 5- 1	3,560	suspended
Imperial Valley Oil Co., Well No. 1, Imperial Co.	32-11-10	2,980	suspended
McGregor Synd., No. 1 Del Mar, San Diego Co.	17-14- 3	1,265	cleaning out
Borderland Oil Co., No. 1 Encinitas, San Diego Co.	12-13- 4	2,418	hd. sd. drilling
Borderland Oil Co., No. 1 Point Loma, San Diego Co.	30-16- 3	2,400	gr. sd. drilling
Grey, H. H., No. 1 Redlands, San Bernardino Co.	25- 1- 2	2,525	fishing
Girard & Grimes, No. 1 Corona, San Bernardino Co.	8- 2- 8	1,549	cleaning

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well, location—	S-T-R	Depth	Status
Standard, No. 1 Point Conception, Santa Barbara Co.	X- 5-34	4,640	br. sh. drilling
Universal Consd., No. 1 Pt. Conception, Santa Barbara Co.	30- 5-34	3,165	hd. sd. drilling
Prairie Oil Co., No. 1 Lompoc, Santa Barbara Co.	15- 7-35	3,687	sd. sh. drilling
Vaqueros Oil Co., No. 1 Purisima, Santa Barbara Co.	5- 7-33	3,005	reaming
Fields Gasoline Co., No. 1 Santa Maria, Santa Barbara Co.	8- 9-33	3,704	cleaning out
Barnsdall, No. 1 Gato Ridge, Santa Barbara Co.	9- 8-32	2,101	sd. sh. drilling
Deuel Pet. Co., No. 1 Santa Ynez, Santa Barbara Co.	9- 7-30	3,098	hd. sd. drilling
Carey, A., No. 1 Goleta, Santa Barbara Co.	1- 4-28	2,880	suspended
General Pet., No. 1 Goleta, Santa Barbara Co.	21- 4-28	4,533	shut in
General Pet., No. 2 Goleta, Santa Barbara Co.	21- 4-28	4,350	suspended
General Pet., No. 134 Goleta, Santa Barbara Co.	21- 4-28	1,485	cemented
General Pet., No. 136 Goleta, Santa Barbara Co.	21- 4-28	1,016	suspended
General Pet., No. 137 Goleta, Santa Barbara Co.	21- 4-28	1,026	suspended
General Pet., No. 138 Goleta, Santa Barbara Co.	21- 4-28	4,798	sd. sh. drilling
General Pet., No. 139 Goleta, Santa Barbara Co.	21- 4-28	1,035	suspended
General Pet., No. 143 Goleta, Santa Barbara Co.	21- 4-28	1,040	suspended
Boles Oil Co., No. 140 Goleta, Santa Barbara Co.	22- 4-28	1,040	suspended
Ring Oil Co., No. 140 Goleta, Santa Barbara Co.	16- 4-28	3,690	sd. sh. drilling
U. S. Pet., No. 141 Goleta, Santa Barbara Co.	20- 4-28	1,035	suspended
U. S. Pet. No. 142 Goleta, Santa Barbara Co.	20- 4-28	1,032	suspended
U. S. Pet., No. 143 Goleta, Santa Barbara Co.	20- 4-28	1,019	suspended
Bolsa Chica, No. 191 Goleta, Santa Barbara Co.	24- 4-29	418	set pipe
Caldwell Brown, No. 159 Goleta, Santa Barbara Co.	24- 4-29	1,040	suspended
El Camino, No. 149 Goleta Tideland, Santa Barbara Co.	22- 4-28	1,035	suspended
Wildcat Oil Co., No. 1 Santa Maria, Santa Barbara Co.	20-10-35	4,531	cleaning out
Pacific Western, No. 1 Gibraltar, Santa Barbara Co.	14- 5-27	2,345	suspended
Shell, No. 1 Summerland, Santa Barbara Co.	18- 4-25	3,870	hd. sd. drilling
Standard, No. 2 Casitas, Santa Barbara Co.	26- 4-25	901	sd. drilling
Continental, Tideland permit No. 121, Santa Barbara Co.	33- 4-25	1,055	suspended
Continental, Tideland permit No. 122, Santa Barbara Co	33- 4-25	1,020	suspended
Continental, Tideland permit No. 123, Santa Barbara Co.	33- 4-25	1,020	suspended
Continental, Tideland permit No. 124-A, Santa Barbara Co.	33- 4-25	418	suspended
Continental, Tideland permit No. 125, Santa Barbara Co.	33- 4-25	1,455	suspended
Continental, Tideland permit No. 126, Santa Barbara Co.	33- 4-25	1,034	suspended
Continental, Tideland permit No. 127, Santa Barbara Co.	33- 4-25	1,055	suspended
Continental, Tideland permit No. 128, Santa Barbara Co.	33- 4-25	1,054	suspended
Continental, Tideland permit No. 129, Santa Barbara Co.	33- 4-25	1,020	suspended
Exeter Oil Co., Tideland permit No. 163, Santa Barbara Co.	32- 4-25	76	suspended
Getty, Geo. F., No. 120 Carpinteria, Santa Barbara Co.	32- 4-25	1,024	suspended
Getty, Geo. F., No. 130 Carpinteria, Santa Barbara Co.	32- 4-25	1,029	suspended
Shell, No. 5 Oxnard, Ventura Co.	14- 2-20	1,954	sd. sh. drilling
Standard, No. 5-9 Saticoy, Ventura Co.	10- 2-22	8,529	redrilling
Prairie Oil & Gas Co., No. 1 Ventura, Ventura Co.	30- 3-22	6,068	sd. sh. drilling
Bolsa Chica, No. 1-A Temescal, Ventura Co.	4- 4-18	2,374	set pipe
Fennell, E. A., No. 1 Lankershim, Ventura Co.	13- 4-19	1,791	sd. sh. drilling
General Pet. No. 1 Fillmore, Ventura Co.	6- 3-19	2,634	set pipe
Associated, No. 1 Rincon Creek, Ventura Co.	19- 4-24	2,080	fishing
Camarillo Synd., No. 1 Camarillo, Ventura Co.	33- 2-20	455	suspended
Pure Oil Co., No. 1 S. P. Canyon, Ventura Co.	15- 4-21	rig	suspended
General Pet., No. 1 Buttonwillow, Kern Co.	6-28-23	2,706	suspended
Milham Explto., No. 9 Buttonwillow, Kern Co.	8-28-23	4,990	suspended
Nordon Oil Co., No. 1 Buttonwillow, Kern Co.	7-29-24	1,300	fishing
Shell, No. 1 Lerdo, Kern Co.	23-28-26	4,202	sd. sh. drilling
Shell, No. 1 Weed Patch, Kern Co.	29-30-29	4,965	oil sand
Shell, No. 1 Edison, Kern Co.	33-29-29	5,300	hd. sd. drilling
Pet. Sec., No. 1 Edison, Kern Co.	14-29-29	mtl.	building rig
Symark Oil Co., No. 1 Edison, Kern Co.	24-29-29	2,130	suspended
Continental, No. 1 Kern Gorge, Kern Co.	6-29-30	1,025	to abandon
Sayre, F. M., No. 1 Edison, Kern Co.	5-30-29	4,220	cleaning out
Elmer Oil Co., No. 1 Tejon, Kern Co.	15-30-30	4,070	sd. sh. drilling
Hancock Oil Co., No. 1 Jasmine, Kern Co.	23-25-27	2,665	suspended
Shell, No. 1 Semitropic, Kern Co.	17-27-23	3,410	sd. sh. drilling
Moran & DeCamp, No. 1 Mojave, Kern Co.	26-10-14	505	hd. sd. drilling
Bardeen, H. A., No. 1 San Emidio, Kern Co.	18-10-23	1,093	cleaning out
Bardeen, H. A., No. 2 San Emidio, Kern Co.	10-10-23	2,600	sd. sh. drilling
Stabler, W. W., No. 1 Commanche Pt., Kern Co.	4-11-18	1,580	sd. sh. drilling
Wrenn, J., No. 1 Antelope Plains, Kern Co.	32-25-17	430	cleaning out
Hannon, Tom, No. 1 Devils Den, Kern Co.	25-25-18	2,615	sd. sh. drilling
Richfield, No. 1 Kreyenhagen, Fresno Co.	33-22-16	1,702	sd. sh. drilling
Ohio Oil Co., No. 1 Coalinga, Fresno Co.	8-21-15	mtl.	building rig
Petroleum Securities, No. 2 Huron, Fresno Co.	28-20-16	7,390	suspended
Fresno Madera Oil Co., No. 1 Clovis, Fresno Co.	18-22-21	4,470	suspended
Western Gulf, No. 1 Penoche Valley, Fresno Co.	26-15-12	5,625	abandoning
Panorama Oil Co., Well No. 1, San Luis Obispo Co.	7-31-21	4,019	suspended
Libby Pet., No. 1 Shandon, San Luis Obispo Co.	31-27-15	4,385	cleaning out
Paso Robles Synd., No. 1 Creston, San Luis Obispo Co.	27-27-11	3,941	cleaning out
Union, No. 1 King City, Monterey Co.	8-22- 8	3,250	suspended
Standard, No. 1 King City, Monterey Co.	23-22- 7	4,630	hd. sd. drilling
Pacific Inland Oil Co., No. 1 Parkfield, Monterey Co.	19-23-15	181	suspended
O'Donnell, J. E., No. 1 Dudley Ridge, Kings Co.	7-23-20	4,310	recemented
Penn Western, No. 1 Tulare Lake, Kings Co.	24-21-18	1,338	suspended
Wellsport Oil Co., No. 1 Devils Den, Kings Co.	9-24-17	3,940	suspended
Twin States Oil Co., No. 1 Point Arena, Mendocino Co.	14-12-17	3,670	hd. sd. drilling
Oakdale Oil Co., No. 1 Oakdale, San Joaquin Co.	3- 2-10	3,535	suspended
Orinda Pet., Well No. 1, Contra Costa Co.	32- 1- 3	590	sd. sh. drilling
White, Roy, No. 1 Pixley, Tulare Co.	8-23-26	4,022	recemented
Terra Bella Oil Co., No. 1 Porterville, Tulare Co.	35-22-27	930	testing
Colusa Oil Co., No. 1 Bush, Colusa Co.	31-15- 4	660	hd. sd. drilling

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Several Good Wells in Southeast Ohio

Few Light Pumpers in West Virginia With Increasing Number of Gas Wells. Southwest Pennsylvania Completions

By Special Correspondent

PITTSBURGH, Pa., July 7.—In the eastern fields a fair number of good oil wells were completed in southeast Ohio, a very few light pumpers were completed in West Virginia, though an increasing number of gas wells. In southwest Pennsylvania no new production was brought in though there were several completed and abandoned.

In southeast Ohio, the most encouraging completions were all reported from Section 13, Fallsbury Township, Licking County, the drilling there being a continuation of the test by the Preston Oil Co. The largest well was completed by the Preston Oil Co., No. 3 on the Wallace Davidson & Co. farm, completed and shot in the Clinton sand and made 160 bbls. the first 24 hours. In the same section, Davis & Co. completed their test on the Therman Willie farm to the Clinton and it was also good for 160 bbls. the first 24 hours after shot. In the same section, Horpell and others completed a test to the Clinton on the J. W. Booth farm and it produced 104 bbls. the first 24 hours after shot.

But slightly away in Section 13, Hanover Township, Edward H. Everett & Co. completed their test on the Criswell-Flenner farm to the Clinton and after shot it produced 75 bbls. the first day.

In Muskingum County, which has been active of late in the number of good producers, but one fair well was reported completed. Here in the NW Section 3, Clay Township, Frank B. Mauller & Co. completed their test on the Frank B. Mauller farm to the Clinton and shot it. It produced 95 bbls. the first 24 hours. In Tuscarawas County, which has also been the center of some very good completions lately, the Hopewell Fuel Gas Co. completed its test on the Stewart Asher farm, in Lot 18, Washington Township, and it produced 120 bbls. after being drilled into the Niagara lime.

SOUTHEAST OHIO

In Hocking County, in the NW Section 2, Washington Township, the Pure Oil Co. completed and shot in the Clinton sand its test on the H. E. Harsh farm and it was good for 75 bbls. the first day. In the NE Section 10, Wheeling Township, the Ohio Fuel Gas Co. completed its No. 4 on the J. O. Alloway farm in the Niagara lime and after shot it made 25 bbls. the first 24 hours. In the NE Section 29, Ward Township, Hocking County, the Preston Oil Co. completed its No. 1,389 on the Sunday Creek Coal Co.'s property to the Niagara lime and it produced 20 bbls. the first 24 hours.

In Perry County there were several fair oil wells completed, the largest in the NW Section 7, Reading Township, where the Miller Oil & Gas Co. completed its test on the Ettal Spohn lot in the Clinton sand and it produced 60 bbls. the first 24 hours after shot. In the SW Section 16, Madison Township, Perry County, the Atha Oil Co. completed its No. 15 on the Melick Brothers farm in the Clinton and it produced 50 bbls. the first day. In this same county but in the NW Section 4, Harrison Township, the Ohio Fuel Gas Co. completed No. 3 on the Orla S. Moore farm and it produced 23 bbls. the first day after being shot in the Clinton. Close to production, in Section 7, Reading Township, the Preston Oil Co.'s test on the F. D. Helser farm was dry in the Clinton sand.

Fair Gas Wells

In the NW Section 15, Pike Township, Coshocton County, McClay Brothers & Co. completed their test on the Perry Ashcraft farm to the Clinton sand and have a gasser estimated good for 3,000,000 feet. In the SW Section 20, Harrison Township, Muskingum County, M. F. Whitehall completed his test on the B. L. Shutz farm to the Clinton sand, good for 1,000,000 feet. In the same county but in Section 3, Highland Township, the Wehrle Co. has a gasser in the top of the Clinton at 4,535 feet in its test on the Chester Hard farm.

Monroe County Completions

In Section 32, Franklin Township, Monroe County, Shay, McMullin & Co. have completed and shot in the Cow Run sand a test on the N. L. Hines farm. It produced 25 bbls. the first 24 hours. In Section 2 of the same township, the Silver Crown Oil & Gas Co. has a 2-bbl. pumper in the Squaw sand. In Section 22 of the same township, William E. Gerber and others completed their test on the W. W. Marsh farm to the Cow Run and it is estimated good for an 8-bbl. pumper. In Bethel Township, Monroe County, Gumm & Co. have a 4-bbl. pumper in the Squaw sand in their test on the Levi McConnell farm. In Section 11 of this township, J. C. Christy & Co. completed a 2-bbl. pumper on the William Martin farm. In this same section, Shaffer & Co. have a duster on the Joshua Williams farm. In Section 2 of Bethel Township, F. O. Parks and others completed their test on the Charles Bowers farm to the Big Lime and it is dry. In this same section, the same operators are completing a test on the Charles Bron farm and it is showing also for a duster. In Bethel Township, L. A. Tinblin is drilling deeper an old well on the C. J. Bode farm. In Washington Township, Monroe County, Lucas and Cobb have a 5-bbl. pumper as their No. 1 on the H. H. Smith farm. In Section 8, Bethel Township, the Preston Oil Co.'s second test on the J. W. Johnson farm is a duster in the second Cow Run sand.

Athens County

Three miles north of Caananville, Section 18, Caanan Township, Athens County, Charles D. Mosher & Co. completed their No. 6 on the Lena L. Bean farm in the first Cow Run sand, a 4-bbl. pumper. In the Fisher Pool, Section 24, Alexander Township, Athens County, C. H. Beasley & Co. completed their No. 13 on the W. D. Whitey farm and it is a light pumper in the Berea grit. In Lake Township, Ashland County, the Great Lakes Oil Co. completed No. 7 on the John P. Smith farm to the Berea grit and it is a 6-bbl. pumper. In Lot 3, Section 10, Chatham Township, same county, the Oko Oil & Gas Co. has a 10-bbl. pumper in the same formation, being its No. 37 on the Sanford-Watson farm. In Section 1, Rush Township, Fairfield County, Murl Myers has a rig up on the J. F. Zartman farm.

In the SW Section 12, Hocking County, the Ohio Fuel Supply Co. has completed its No. 5,130 on the Sunday Creek Coal Co. property and it is a gasser good for 200,000 feet. In Section 11, Wheeling Township, Guernsey County, the Ohio Fuel Gas Co. has a 15-bbl. pumper at its No. 3 on the Lora C. Stocker farm. The same company has a 15-bbl. pumper at its No. 3 on the J. O. Alloway farm. Both wells were drilled to the Niagara lime. In the northeast quarter of Cross Creek Township, Jefferson County, D. Spear & Co. have completed their No. 9 on the Jefferson County Infirmary farm to the Berea grit and it is good for a 5-bbl. well. In Lot 2, Section 13, Chatham Township, Medina County, the Oko Oil & Gas Co. completed its No. 36 on the Henry Easing farm and it was about a 5-bbl. pumper. In the same township but in Lot 3, Section 10, the same company has a light pumper at No. 38 on the Sanford Watson farm.

In Washington Township, Muskingum County, the Atha Oil Co.'s test on the J. H. Wasmott farm is a light gasser. In the same township, the Wittmer Oil & Gas Properties have a duster in the No. 1 on the J. S. Robinson. The same company brought in a gasser at its No. 2 on the E. E. Chaplin farm. In Enoch Township, Noble County, Way Wickens & Co. completed their No. 6 on the Henry L. Hupp farm and it is a duster. In Section 32, Elk Township, Noble County, H. R. Smidy and others have a rig up for their No. 2 on the C. E. Johning farm. In the SE Section 5, Noble County, a local company completed a test on the J. T. Reed farm in the Gordon sand and found that sand badly broken up and bone dry.

In the SW of Section 19, Harrison Township, Perry County, the Ohio Fuel Gas Co.'s test on the W. H. Wilson farm is a light gasser in the Clinton sand. In the SW of Section 8, same township, D. H. Courtney and others completed their test on the Israel Henning farm to the Clinton sand and it is a 5-bbl. pumper. In the SE of Section 22, Reading Township, Perry County, Perry Sturm & Co. have a very light pumper at No. 1 on the Vernon Henry farm. The operators are undecided whether to give it a shot and test in the Clinton sand. In Section 32, Pleasant Township, Perry County, the Allegheny Oil Co. completed No. 16 on the D. C. Longstreet farm to the Berea grit and it is a light pumper. In Reading Township, Perry Sturm & Co. are drilling a test on the Levi Wolfe farm.

Tuscarawas County

Three-fourths of a mile north of Tuscarawas, Warwick Township, Tuscarawas County, Blackstone & Co. completed a test on the Adam Doltz farm to the Niagara lime and it is a duster. In the same county, Section 35, Washington Township, the Gas Producing Co. of Ohio has a gasser at No. 3 on the Rachel Smetts & Co. farm. In Oxford Township, the Gordon Oil Co. completed No. 2 on the Sarah Ripley farm as a gas well.

In Vinton County, at Boling Mills, Section 3, Knox Township, H. C. Farmer & Co. completed No. 5 on the John and Louisa Stanley farm to the Berea grit and it is good for a 5-bbl. pumper. In Section 4 of the same township, the same company has a 2-bbl. pumper in the Berea grit on the Cameron S. Clark farm. In the NW of Sutton Township, Meigs County, the Twenty-Five Association, Inc., have started to drill their No. 21 on the William Carnahan farm. In Washington County, there were two completions reported. In Section 19, Aurelius Township, Charles Wickens completed a 4-bbl. pumper on the Henry Wickens farm in the 500-foot sand, and in Section 2, Washington Township, the Pure Oil Co. brought in a gasser on the E. Harst farm.

WEST VIRGINIA

There were but a few oil wells completed during the week in West Virginia and these were all small, the largest being good for 10 bbls. In Sherman district, Calhoun County, C. B. Lewis & Co. completed their test on the William Poling farm in the Big Injun sand, showing for a 10-bbl. pumper. In Williams district, Wood County, Rinehart and Carder completed No. 3 on the C. H. Athey farm, a 10-bbl. pumper in the Salt sand. In the same district the Hogglin Oil Co.'s No. 13 on the Newton Ogden heir's farm to the Cow Run came in for 2 bbls. In Murphy district, Ritchie County, the Hope Natural Gas Co. completed No. 1,196 to the Maxon sand on the John K. Bradley farm, good for 5 bbls. In Union district, Harrison County, the same company completed No. 574 on the Stephen Pitts farm, showing for a light pumper in the Speechley sand.

In Carroll district, Lincoln County, the Allegheny Gas Corp. has a gasser on the Marshall Lucas farm. In Union district the Woodyal Gas Co. has a gasser in No. 2 on the John A. Lambert farm in the Berea grit. In Scott district, Boone County, the United Fuel Gas Co. completed No. 4,069 on the Horse Creek Land & Mining Co.'s tract and has a gasser. In Church district, Wetzel County, D. W. Null & Co. completed a gas well in the Gordon sand in No. 2 Ashcraft heirs. In Lee district, Calhoun County, F. F. McIntosh & Co. have a Salt sand gasser at No. 3 on the John I. McCoy farm. In Birch district, Braxton County, the Philadelphia Natural Gas Co. completed No. 7,563 on the E. M. Bourne farm to the Salt sand and has a gas well. In Freeman's Creek district, Lewis County, the Pittsburgh & West Virginia Gas Co. completed No. 7,556 on the R. C. Davidson farm to the Salt sand and has a fair gasser.

On Tanners Creek, DeKalb district, Gilmer County, the McCall Drilling Co. completed No. 7 on the Riddle Brothers farm in the Big Injun sand and has a light gasser. On Days Run, Clay district, Monongalia County, the Philadelphia Oil Co. drilled to a depth of 2,484 feet on the W. L. Keck farm, and it is dry. In Clay district again, the Moore Tex Oil Co.'s second test on the Leonard Shank farm has been drilled deeper to the Big Injun sand and is a paying gas well. In the same county, but on Dunkard Creek of Clay district, the same company has a fair gasser in the Big Injun on the James I. Moore farm.

In Geary district, Roane County, Godfrey L. Cabot completed his test on the J. L. Boggs farm to the Salt sand, and has a fair gas well. In Ready district, Wirt County, the Heck Oil Co. completed No. 2 on the J. E. and J. G. Watkins farm in the Berea grit and it is an oil well good for about 3 bbls. On Spruce Run of Little Creek, Spencer district, Roane County, Paul Weekly & Co. completed No. 1 on the Alonzo Epling farm, and it is a light gas well. In Mannington district, Marion County, Monroe and Laughlin have a gasser after drilling to a total depth of 3,484 feet in No. 1 on the Henry Campbell farm. In Clay district, Harrison County, the Pittsburgh & West Virginia Gas Co. completed No. 4,986 on the Lucas Brothers' farm to the Big Injun and has a fair gas well. In Union district, Wood County, the Mills Oil Co. abandoned its test on the D. P. Dunham farm, finding it unproductive in all sands.

SOUTHWEST PENNSYLVANIA

There were several completions in Greene County but none of note. In Whitely Township, the Equitable Gas Co. completed tests on the S. M. Cowell and James Hatfield farm and both were fair gas wells. In the same township the Peoples Natural Gas Co. abandoned its No. 2 on the Jay Morris farm after reaching 3,330 feet. Also in the same township the Dunn Mar Oil & Gas Co. abandoned its test on the Belle Blaker farm.

In Greene Township, of Greene County, J. L. Garard completed his No. 4 on the Olive Barb farm, showing for a light pumper in the Dunkard sand. In the same township the Peoples Natural Gas Co. completed a test on the Jasper C. Morris farm. It is dry in all sands and has been abandoned. Farther north, in Robinson Township, Allegheny County, the Leader Oil Co. has drilled its test on the Edward Shore farm through the Fifth sand and it is a duster. In Darlington Township, Beaver County, the Fiske Brick Co. completed a fair gasser on its own property.

Lucas County Wildcat Is Producer

May Bring Out Further Development in Old Lima Field of Northwestern Ohio. Central Ohio Still Leads in Activity

By Whit
Staff Correspondent, Central West Fields

FINDLAY, Ohio, July 7.—Little was accomplished by the drill during the week in review in any division of the Central West Field, the central Ohio area showing the greater activity. The extreme heat has been against active development work in all the divisions.

The important find in the old Lima Field of northwestern Ohio is a wildcat 4 miles in advance of production where Dillon & Weed drilled a test 1,295 feet from the north line and 220 feet from the east line of the Henry Butts farm, SW Section 28, Monclova Township, Lucas County, which produced an initial of 12 bbls. from the Trenton lime which was topped at 1,335 feet and drilled to a total depth of 1,385 feet. It required a string of 410 feet of casing for the hole, and may bring out further development in the western part of Lucas County.

Murray B. Chidester, old-time oil operator of Bowling Green, drilled No. 10 in the northwest corner of the William A. Iches farm, NW Section 26, Plain Township, Wood County. Trenton was topped at 1,342 feet and drilled 243 feet in the lime, the well producing nothing the first 24 hours but water and reported dry as far as oil is concerned, unless the oil comes in later, a thing that happens quite often in the Trenton lime. Same party is drilling No. 9 B. P. Stratton farm, Section 34, same township. The Ohio Oil Co. abandoned old No. 2 on the Jacob Neier farm, Section 10, Henry Township, same county.

D. B. Bushey is drilling No. 4 on the Nathan Taylor farm, Section 25, Allen Township, Hancock County. R. W. Kirk and others drilling a second test on the E. H. James, Section 34, Biglick Township, same county.

Kelley Brothers' test on the Earl D. Brown farm, Section 19, Perry Township, Allen County, pumped an initial of but 2 bbls. Same parties abandoned No. 1 Reuben Thut farm, Section 2, Bath Township, same county.

The Lima Trust Co. abandoned Nos. 1 and 2 Harry J. Hanold and Nos. 1, 2 and 3 James Rapp farms, Section 24, Moulton Township, Auglaize County.

The Recovery Oil & Gas Co. is drilling a test on the J. S. Burch farm, Section 17, Butler Township, Mercer County.

T. F. Obrien and others' second test in the northwest corner of the W. Michaels farm, SW Section 31, Sandusky Township, Sandusky County, was dry at from 1,332-1,416 feet, or 84 feet in the Trenton.

O'Neil Brothers are starting a test on the J. N. Perrin farm, Section 34, Cynthian Township, Shelby County.

Bell Center Oil & Gas Co. drilled a test on the Stephen Ammons farm, 5 miles southwest of Roundhead, in Logan County, which is a light gas well at 1,396 feet and far removed from any known production.

Henrys Oil & Gas Co. is drilling a wildcat on the D. J. Creager, Section 27, Damascus Township, Henry County, in an effort to extend the old Trenton Rock Field to the north and northwest.

CENTRAL OHIO FIELDS

Twenty-six completions were reported for the week from the Central Ohio Field, with 11 producers with an initial of 632 bbls., 7 dry holes and 8 gas wells, while in new work starting there were 13 locations reported and 20 wells started spudding for a total of 33, which is very good for this season of the year. Work will no doubt continue at a brisk rate during the next few months, especially in the gas producing areas.

In Ashland County, Orange Township, the Ohio Fuel Gas Co. got a gas well in No. 1-5,145 Wade Welch farm, Section 12. The Preston Oil Co.'s No. 1-1,427 Ellis A. Morris, Section 34, Mohican Township, developed a dry hole after drilling through 12 feet of sand which was dry, which is something unusual for that part of the field. In Lake Township, Robinson and others' No. 2 W. S. Wolf, Section 16, pumped 3 bbls. from 667-732 feet. Same firm's No. 7 John P. Smith, Section 9, reported at 20 bbls., initial from 764-833 feet, while No. 3 W. S. Wolfe, Section 16, pumped but 1 bbl. from 650-84 feet.

In Medina County, Ohio Fuel Gas Co. has a gas well in No. 1-5,117 Walter E. Buck, Section 29.

In Lorain County, Carlisle Township, has a gas well in No. 1-5,123. Emanuel Eckler, Sections 8 and 13, also a gas well in No. 4-5,122 Julia A. Clark, Sections 13 and 18.

In Wayne County, Faulkner and others found a dry hole in No. 5 George Marks, Section 36, in the Berea sand from 608-28 feet.

In Holmes County, Hardy Township, the East Ohio Gas Co. made a good find when the No. 4 on the S. H. Sterling, Lot 27, produced an initial of 140 bbls. from 3,333-60 feet.

In Cuyahoga County, Olmstead Township, the Ohio Fuel Gas Co.'s No. 1-5,134 Charles W. Root, fractional Section 3, is a duster, and No. 1 George W. Walkden, same section, is drilling.

In Ashtabula County, the Ohio Fuel Gas Co. struck a dry hole in No. 1-4,978 G. E. Chester farm, Section 34, Rome Township.

In Richland County, Wheeler Township, the test on the Meyers Oil & Gas Co., on the J. F. Houston farm, Section 8, was dry in the shallow sand from 413-50 feet.

In Knox County, Brown Township, the Ohio Fuel Gas Co. has a gas well in No. 3-1,575 William Myers farm, Lot 38, and the East Ohio Gas Co.'s No. 12 Charles Scoles, Lot 30, same township, reported at 4 bbls. from 692-700 feet.

The Ohio Fuel Gas Co. reports a dry hole in No. 1-5,129 on the John Snow farm, Section 8, Monroe Township, Coshocton County, from 3,219-3,310 feet.

In Summitt County, the East Ohio Gas Co. has a gas well in a test on the W. C. Rech, Section 7, Green Township, from 4,018-60 feet.

In Licking County, Fallsburg Township, the second test on the Wallace Davidson, Section 13, reported with an initial around 140 bbls. from 2,895-2,950 feet. Norpell and others' No. 1 W. T. Booth, same section, reported at 104 bbls. initial from 2,903-50 feet. Newark Oil Tool Co. found a duster in a test on the C. W. Sommerville, in Perry Township, from 631-642 feet. Everett Gas Co.'s No. 1 on the Criswell-Flenner farm, Section 13, Hanover Township, reported good for 75 bbls. initial from 2,925-65 feet. The Pure Oil Co. is drilling No. 3 Ed. Hickey farm, Section 13, same township.

In Muskingum County, Hopewell Township, the Preston Oil Co.'s No. 1-1,407 W. O. Burrier, Section 5, estimated at 60 bbls. initial production. Hopewell Gas & Fuel Co., drilling No. 4 James M. Sidle, Section 5, and starting No. 5 same lease. Ohio Fuel Gas Co. got a gas well in No. 1-5,060 W. L. McCurdy, Section 2, Perry Township, at a total depth of 4,247½ feet.

In Athens County, Carthage Township, the Orange Gas Co. struck a gas well at a second test on the S. R. Coon, Section 19, in the Maxon sand from 1,060-69 feet.

In Tuscarawas County, Oxford Township, the Traders Oil & Gas Co. has an average gas well in a second test on the Oscar Quillan, Section 21, from 3,640-45 feet. Capital Drilling Co.'s No. 2 Stewart Asher farm, Section 18, Washington Township, reported good for 60 bbls. initial from 3,605-17 feet.

In Guernsey County, Wheeling Township, the Ohio Fuel Gas Co.'s late well on the J. O. Alloway, Section 10, is reported showing for 25 bbls. from 3,562-70 feet; total depth 3,572 feet.

In Morgan County, Marion Township, Ohio Fuel Gas Co.'s No. 2-5,170 Simon Remy farm, Section 29, is a fair gas well in the lower Berea sand from a total depth of 1,518 feet.

INDIANA

The week was a quiet one in all parts of Indiana, as far as new completions are concerned, with only two wells reported and both were dry holes. In Gibson County, Columbia Township, Shell Petroleum Corp.'s No. 3 George Allen, Section 22, being one and the second one being H. C. Darby and others' test 1,020 feet from the north line and 1,070 feet from the west line of the C. E. Miller farm, NE, Section 26, Logan Township, Pike County, at a total depth of 1,368 feet.

Big Four Oil & Gas Co., drilling No. 4 C. T. Sloan, Section 18, Washington Township, Gibson County.

Pike County is the most active at this time. In Clay Township, the Mahutska Oil Co. is drilling a well on the N. Lindy, Section 31, and Charles C. Talliaferro, Jr., drilling No. 6 Mary M. McAtee, Location 46, while William Bell and others drilling No. 2 Robert Hyneman, Lot 9, same township. In Washington Township, the Wiser Oil Co. drilling No. 6 William Phillips, Section 23, and E. C. Bolds, drilling No. 6 M. J. Atkinson, Section 22. C. E. Wommer, drilling No. 1 Ed. Scales, Section 30, Washington Township. Charles C. Talliaferro, Jr., drilling No. 2 Lee Gorge farm, Section 30, same township.

L. G. Gee and others drilling a second test on the Sylvester Swan, Section 28, Veale Township, Daviess County.

ILLINOIS

The best find for the week in the Illinois fields is the Ohio Oil Co.'s No. 9, 150 feet from the south line and 1,894 feet from the east line of the Phillip Frye farm, SW NW, Section 34, Sugar Loaf Township, St. Clair County, in the western area of the State, the well producing an initial of 140 bbls. from 683-737 feet. Same company is drilling No. 25 Matilda Dyroff, Section 28, and Gorman & Weihl are drilling No. 2 O. G. Mueller, Section 33.

Robinson Oil Co.'s test, 200 feet from the north line and 1,200 feet from the west line of the William Schaffer, SW, Section 15, Wabash Township, Wabash County, produced 45 bbls. from 1,472-96 feet.

In Dennison Township, Lawrence County, the Ohio Oil Co. is drilling No. 48 L. A. Buchannan, Section 2, and No. 11 E. J. Ridgley farm, Section 12.

Thomas Folks and others are drilling a test on the Wineburg Brothers farm, Section 18, Breese Township, Clinton County, and also drilling No. 1 Sarah Crocker farm, Section 17, same township.

Associated Producers Co. is drilling No. 54 A. E. Dorsey farm, Section 7, Parker Township, Clark County, in the old shallow Casey-Westfield Field.

Petroleum Enterprise Corp. is drilling a test in Randolph County, on the John Dufour farm.

GOOD WELL AT SHALLOW DEPTH IN THE BUFORD AREA, KENTUCKY

By Whit
Staff Correspondent, Kentucky-Tennessee

OWENSBORO, Ky., July 7.—Extreme heat and scarcity of water hampered development work over the entire Kentucky regions and for that reason few completions have been reported since the last review of the field. One of the best of the late wells is the Kemrow Co.'s No. 3 W. H. Hamilton farm, in the Buford area of western Ohio County which is credited with an initial production of 100 bbls., the oil being found in the Stray sand formation that has proven so productive in the county. Dry holes are found in between good producers, but it is the Stray formation that boosted the production of the Owensboro Field. The oil being found at a very shallow depth makes cheap operating. There is very little to report outside of Ohio, Daviess and Henderson Counties, the latter being hard hit with dry holes, and the late wells that come in producers are rather small compared with the early wells in this county, which is known as the Niagara Field.

Very few wells are under way in the eastern half of the State, although the Swiss Oil Corp., that took over the big holdings of the Union Gas & Oil Co. a few years ago has been doing the bulk of the operating in Lawrence, Johnson and Magoffin Counties where small wells are found, but while small the Weir sand from whence the oil is found, shows wonderful staying qualities. The Union Oil & Gas Co., before selling to the Swiss corporation, drilled close to 600 wells on a block close to 20,000 acres, and there are still many locations yet to drill.

Ohio County Wells

In the Friendship Church area of Ohio County, T. P. Royal and others' No. 15 on the T. P. Royal 60 acres, is reported as good for 75 bbls. initial. No. 16, same farm, is drilling.

The Cumberland Petroleum and Kemrow Co.'s No. 3 W. H. Hamilton, in the Buford Pool, produced 100 bbls. initial from the Stray sand.

James C. Ellis and others' No. 4 Albert Payne, was dry in the Jett sand.

Louisville Gas & Electric Co.'s No. 1 John Christian farm, in the Haynesville area, reported dry in the Jett sand, and may try for production in the Barlow.

James C. Ellis and others' No. 5 Don Mitchell farm, in the Bell's Run section, is reported at 50 bbls. initial.

D. J. White and others have a dry hole in No. 1 on the Tom Fuqua farm, in Ohio County.

H. L. Ogle and others are drilling No. 3 on the J. J. Miller farm in the Deanfield Field, also drilling No. 27 on the Pate Royal, in the Friendship Church Pool.

Miller & Damron is drilling No. 4 Murray farm, in the Haynesville Field. Louisiana Gas & Electric Co. is drilling No. 9 R. A. Miller 175 acres, same field.

(Continued on Page 119)

Is Second Oldest Producing Oil Field

Florence Field in Fremont County, Colorado, Reviewed by Petroleum Engineer Who Visited It With Geologists

By Hollis P. Porter and Tolbert R. Ingram

The Florence Field in Fremont County, Colorado, almost in the center of the state, which has the distinction of being the second oldest producing oil field in the United States, along with some characteristics not found elsewhere, again takes an interesting place in the spotlight with claims for the honor of fostering the world's first practical oil refining operation. The date associated with the first successful attempts to refine illuminating oil in that district is 1841, or almost 18 years before the first discovery of oil in the Drake well in Pennsylvania.

Scattered wells in the South Field near Florence.

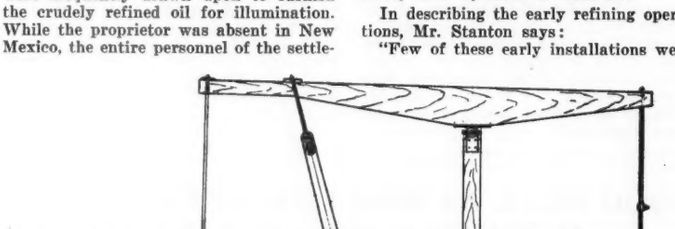
Early history and romance go hand in hand with the story of the development of this field which has produced more than 12,000,000 bbls. of oil, none of which came from sands, all of which was pumped to the surface and which is found in a deep basin in which no water is encountered in the horizons drilled. One well in the field produced 622,000 bbls. before it was abandoned and some of its oldest wells are still producing after 42 years of continuous pumping.

Last summer a number of geologists on their way to the annual convention of the American Association of Petroleum Geologists visited the Florence district and enjoyed a trip through the field and listened to interesting talks upon its early history. Hollis P. Porter, formerly mechancial engineer for the Gypsy Oil Co. at Tulsa, a member of this party, who contributes an accompanying paper on some phases of this operation, touches but briefly on the field's early history and does not refer to the first attempts at refining crude oil. In fact, most of the data on the last-named subject has been compiled since then and gives another angle to his discussion.

Robert E. Stanton, writing in the Conoco Magazine, published by Continental Oil Co., the principal operator in the Florence Field, reviews some of the data regarding the early refining operations which has been collected from a variety of sources. He says that an early account of Fremont County, prepared from the notes and reminiscences of one of the early settlers in the section—J. W. Johnson, Jr., makes a brief mention of the early activities of Maurice Le Doux, a former resident of Taos, N. M., who established the first white settlement in the vicinity of Florence between the years of 1838 and 1840, for the purpose of conducting a trading post. The location of the settlement is now identified as a point a few miles south of the present town, not far from the site of the original oil springs, or seepages, on Four-Mile Creek.

Le Doux is credited in some of the earlier accounts as being the first to refine the crude oil from the Florence Field for the purpose of obtaining an illuminating oil to supply the improvised wick lamps which lighted his trading post. An accurate description of the crude equipment which Le Doux devised for this purpose is not available from any known account, but it is commonly presumed that a small still of several gallons capacity and a condensing tube, probably a rifle barrel, comprised the installation.

The trading establishment of Le Doux became a neutral ground in the territory which was shared between the warring factions of the Utes and Arapahoes, and for several years a thriving if not profitable enterprise was conducted. During this time the resources of the oil springs were frequently drawn upon to furnish the crudely refined oil for illumination. While the proprietor was absent in New Mexico, the entire personnel of the settlement was surprised by a band of Indians and fell in the memorable massacre of Christmas day, 1849. The mutilated bodies of the victims were discovered among the smoke blackened ruins several weeks later by Kit Carson, the younger, and a small group of his followers.



Novel design of beam pump supported on two sills.

The year 1841 is generally associated with the first successful attempts to refine illuminating oil at the De Loux trading post. The more apparent virtues of crude petroleum had been recognized before its first use in a refined state and the roving Indian tribes had taken advantage of the therapeutic values of the oil springs for unknown ages before the advent of the white man. Mr. Stanton expresses regret that this first refining experience should be so completely isolated from every direct association with Le Doux and his early activities in the locality of the present Florence Field, but that a number of existing records generally agree that the foregoing account, in substance, is correct. Isaac Canfield, who is credited with drilling the first deep well in the field, relates that Le Doux' connection with the earlier development of the oil resources was still a memorable topic for conversation at the time of his arrival in the locality during the later part of the last century.

The history of the Florence development from that time is much better authenticated and begins with the completion in 1862 of a well drilled for the express purpose of finding oil on Oil Creek, 6 miles north of Canon City in what was then Colorado territory. A. M. Cassedy, who came out from Pennsylvania, drilled the well to a total depth of 24 feet and its production was 1 bbl. per day. James Murphy, who also hailed from Pennsylvania, followed Cassedy and brought with him a small refinery for the recovery of "coal oil" as kerosene then was known. This plant was set up near the oil well and put into operation and the product was hauled to Denver, Pueblo and Santa Fe by ox teams, where the product readily sold at prices ranging as high as $6 per gallon. This refinery is said to have turned out nearly 300,000 gallons of "coal oil." It was several years later, in 1876, that Mr. Cassedy induced Isaac Canfield to drill the "deep" well near the present town of Coal Creek which struck oil at 1,187 feet. This was followed by the forming of numerous companies to drill for oil, refine and market the product and to speculate in land. The consolidation of some of these companies finally resulted in the forming of the United Oil Co., which subsequently was taken over by the Continental Oil Co., and out of which grew the complete and modern refinery now operated at Florence.

In describing the early refining operations, Mr. Stanton says:

"Few of these early installations were provided with stills much larger than a regulation size steel oil drum; almost invariably they were constructed of charcoal iron, as the use of steel plate had not yet become prominent. The seams were closed, not with the riveted joint so much used in our present day construction but with soft iron slugs which were expanded on each end by hammering after they had been placed in position. The stills were usually elevated a few feet above the ground on a setting of limestone or adobe to allow a fire of greasewood, cottonwood, or occasionally coal, to be placed beneath them. The condensing system usually consisted of a few coils of pipe immersed in a running stream, although the more pretentious installations boasted a coil bank in a wooden trough which received a constant trickle of water from some nearby source. Such installations were usually operated by the rule of thumb rather than by the elaborate technical methods which characterize the manufacture of petroleum products in our present day. The stills were charged nearly full of crude oil, the filling being accomplished with buckets or from an elevated tank, before the fires were lighted."

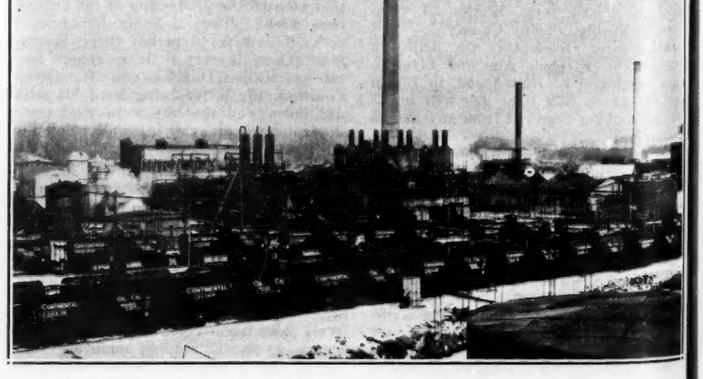
Description of Field

Mr. Porter goes into more technical details as follows:

But why oil in this place? This is the first question that might enter the mind of a newcomer. Pike's Peak can be seen to the north, the Royal Gorge only a few miles to the west; the famous Cripple Creek gold mining district is between Florence and Pike's Peak; winding graveled highways leading off through rugged mountain pass to scenic attractions in many directions, and the little valley is surrounded on three sides by high mountain ranges. The brokenup crust of the earth would seem to be so disturbed on all sides that it would not retain the elusive fluid, oil; yet, there it is, found in the Pierre (or black) shale formation. This shale is found at variable depths from little more than 800 feet at the west field near Canon City, to 3,400 feet deep in the older portion of the field and south of Florence. With Florence as a center, the extreme limits of the field south and west can be reached within a radius of 8 miles. There is an overburden of sand, gravel and boulders, all badly eroded in places. There is no sandstone of consequence. Little gas is found, and as a consequence coal is used for fuel when electricity is not convenient for power purposes. A new well does not flow since there is neither sufficient gas nor water connected with the pay horizon to supply the necessary energy.

At the south side and within the shadow of the Continental refinery is a well

(Continued on Page 104)



Refinery of the Continental Oil Co. at Florence, Colo.

Pipe Line Construction News

MEMPHIS NATURAL PLANS EXTENSIONS TO SYSTEM

Announcement has been made by M. B. Higman, chief engineer of Memphis Natural Gas Co., that construction will commence shortly of a new 50-mile pipe line to interlink the company's main pipe line with the towns of Leland, Indianola, Morehead, Ittabena and Greenwood, Miss., with the possibility of an additional 50-mile extension, to be constructed at a later date, to hookup the towns of Carrollton, Winona, Grenada and Charleston, Miss. Surveys for the first 50-mile line are now being made, and acquisition of rights of way is expected to start at an early date.

Memphis Natural Gas Co., in co-operation with Mississippi Power & Light Co., has recently completed preliminary plans and specifications, together with a complete market survey of the new territory to be supplied with natural gas. It is estimated that full load consumption can be secured within three or four years, the daily load at the end of three years being estimated at 4,390,000 feet for the first 50-mile line.

The new line will tap the company's main 18-inch high pressure line at a point near Greenville, Miss., present pressures being ample to take care of the additional requirements.

The capacity of the Guthrie, La., compressor station of Memphis Natural Gas Co. is to be increased by approximately 20 per cent, according to an announcement by D. C. Schaffer, general superintendent. The increased capacity is made necessary as the result of new heating contracts effective this coming winter. Contracts for the necessary work are now being let, so that it will be completed well in advance of the next heating season. The Guthrie station, one of two compressor stations maintained by Memphis Natural Gas Co., is located at the Monroe Field end of the company's 210-mile high pressure pipe line, which terminates in Memphis, Tenn. The other station is located near Benoit, Miss.

SOUTHWESTERN NATURAL GAS

Southwestern Natural Gas Co., a subsidiary of Appalachian Gas Corp., has opened offices in the Exchange National Bank Building, Tulsa, and L. E. Farley, formerly of San Antonio, Tex., has been placed in charge, according to announcement of H. G. Scott, president of the company.

Mr. Farley, who is a pipe line operator of many years standing, will have supervision of the construction of the company's new 112-mile high pressure pipe line connecting the Quinton fields of Oklahoma with Tulsa, Muskogee, Boynton, Sapulpa and other communities, work on which was started last Monday, and which will be in operation in the early autumn.

EASTERN GAS EXTENSIONS

PITTSBURGH, Pa., July 7.—Plans have been completed by the Equitable Gas Co. for expending $400,000 during the summer in the drilling of new wells and the laying of pipe lines in southwestern Pennsylvania and West Virginia in order to meet demands for natural gas when winter comes.

PIPE ORDERS

During the month of June, the A. O. Smith Corp. received orders for large diameter gas line pipe previously unannounced, amounting to 772 miles, or approximately 100,000 tons, all for current shipment. Part of this tonnage is for the Missouri Valley, Southern Natural Gas and United Gas.

A SAFETY MEASURE

BRADFORD, Pa., July 5.—The United Refining Co., of Warren, Pa., is engaged in taking up about 5 miles of its 4-inch and 5-inch main pipe lines between the Bradford Field and Warren that run through the third and fourth wards of this city and laying two new lines around the city outside the corporation limits. This is done to prevent possible leakage of oil from the lines in the city and danger that might be caused by a break in the lines and delays, due to its location, in making the necessary repairs.

BAKER GLENDIVE LINE

CASPER, Wyo., July 5.—Wibaux, in eastern Montana and one of the cities on the route of the proposed pipe line from the Baker Glendive Field to Williston, N. Dak., expects to have natural gas in the city mains by the last of July. The Montana-Dakota Power Co. is laying mains in the city and expects to have the work completed next week. The trunk line is laid past this point and the gas will probably be turned in by the first of August. The Hope Engineering Co. has made such rapid progress in the laying of the line that gas is expected to be available along the route by August instead of October as was given out when the line was started last spring.

UTAH GAS LINE

CASPER, Wyo., July 5.—Wasatch Gas Co. will lay a lateral from the main line of the Uinta Pipe Line Co. in Tooele in northern Utah. The trunk line will be tapped near Garfield and the lateral will supply gas for domestic consumption to the residents of Tooele and fuel for the International Smelting Co. near Tooele. The line will be 18 miles long and the estimated cost is $200,000. It is expected it will be completed by October 1. The Uinta, Mountain Fuel, Wasatch and several other companies are subsidiaries of the Western Public Service Corp., organized by the Ohio Oil Co. and affiliated interests.

SHERIDAN GAS LINE

CASPER, Wyo., July 5.—The surveying crew working on the natural gas pipe line, starting in at the Billy Creek gas field, has progressed about 10 miles towards Sheridan, Wyo. The work is being rushed in order that active laying of pipe may start about July 15, with intention of having the gas on distribution in Sheridan by the end of September. During August it is expected a crew will be busy in Sheridan relaying the 4-inch city mains, some of which will be replaced with 8 and 10-inch pipe.

MORE PIPE BUSINESS EXPECTED TO COME OUT

By B. E. V. Luty

PITTSBURGH, Pa., July 7.—According to all precedents the first half of July is the dullest part of a normal or typical year. Years in which trade grew duller after July or showed no improvement were in the restrospect plainly marked as exceptional years. This year to date has been an off year but it has been consistent in its offness, so to speak, having undergone neither progressive improvement nor progressive loss. It did have one irregularity, showing peak production in February when March is the usual month, sometimes April, but comparing the first quarter total production and the second quarter the two are in usual relationship with each other, daily production averaging 7 per cent less in second quarter than in first quarter.

As demand and operations are now very light, the ingot producing rate being barely above 60 per cent, much room is left for seasonal improvement. According to precedent an increase in buying might become visible as early as the second half of July and should in any case be noticeable in August. When there has been an autumn improvement at all it has always shown itself by there being slightly heavier steel production in August than in July.

The half year has not been such a very poor one in tonnage. Total production of ingots has been about 23,900,000 gross tons, which is 18 or 19 per cent under the first half of 1929, an altogether exceptional period, and 4 to 5 per cent under 1928, while it closely approximates the first half in each of the two preceding years. Steel has seemed very dull because there had previously been such a spurt and because capacity is greater, whereby operation of mills individually is lighter than with the same tonnage four years ago.

Pipe mills are filled to capacity on the larger sizes while butt weld is rather dull as formerly. Seasonal increase in butt weld demand began late in March, reaching only a moderate level and there has been no further improvement in the past weeks. This is chiefly a reflection of building operations, involving pipe, being light. There is much road building and much fabricated structural work, but the latter runs chiefly to bridges, viaducts, subways, etc. Residential building is very light.

Producers of line pipe are filled for three or four months, by a conservative estimate, on the larger sizes, say from 10-inch up, if not indeed from 8-inch up. Capacity is somewhat limited as so many lapweld furnaces have been dismantled to make way for new departments, seamless or electric welding, and the full capacity in this new connection is by no means all in operation yet.

The A. O. Smith Corp., making electric welded pipe at Milwaukee, with a capacity of 25 miles a day or more, received orders during June for 772 miles or about 100,000 tons, for current shipment, largely from the Missouri Valley, Southern Natural Gas and United Gas companies.

Apparently there are no large orders being figured on at the present time, partly perhaps because deliveries could not well be arranged, but much more business is expected to come out, say after a month or two. Prospects are, with so many projects, that there will be much work carried over to next year. It is thought that there will be enough demand for laying pipe in the southern part of the country, where weather conditions will not interfere materially, to keep capacity well occupied even during the winter.

Price irregularities continue in several finished steel products but the market has not been weakening at any marked pace in the past few weeks. In bars 1.75 cents and in plates and shapes 1.70 cents, is the market on ordinary car loads, while lower prices are made on really attractive orders. Pipe is perfectly steady.

SASKATCHEWAN GAS LINE

CHATHAM, Ontario, July 5.—Two applications have been made to the Regina, Saskatchewan, city council for a franchise to supply natural gas to that city. The Dominion Gas & Electric Corp., represented by C. J. Yorath, asked an exclusive franchise for 20 years. This is the company which recently took over the Canadian subsidiaries of the International Utilities Corp., including the Canadian Western Natural Gas Co. and Northwestern Utilities, Ltd. It is understood the company's chief source of supply will be the Turner Valley Field, the company having a contract with the Royalite Oil Co. for its entire residual gas production.

An alternative proposal was submitted by the Northern Utilities Co., represented by C. O. Moore, its president. This company is backed by New York and Texas interests, and proposes to construct a pipe line from Regina west to a point 25 miles north of Medicine Hat, feeder lines connecting this with unspecified gas fields in southeastern Alberta. The company estimated the cost of the project between $10,000,000 and $15,000,000. It was estimated that a 15-inch line would supply immediate needs of Regina, but a 20-inch line is planned to meet future requirements; gas to be delivered by October 1, 1931. It is understood that both companies are applying for franchises to supply the Saskatchewan cities of Moose Jaw, Swift Current and Saskatoon.

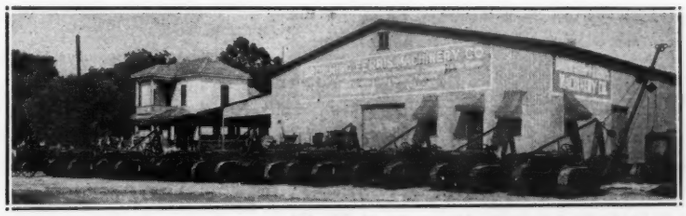
TO BEGIN LOOP TO HOUSTON

HOUSTON, Tex., July 7.—Houston Gulf Gas Co. is starting laying approximately 100 miles of loop on its trunk line from Southwest Texas to Houston. The loop line, which will be 16 inches, will extend 60 miles from Refugio to Edna and 40 miles on the Houston end. The company also contemplates several projects to link some of its various systems.

VAN LINE PROGRESS

Pumping stations on the Pure-Van Pipe Line Co.'s 10-inch line from the Van Field to Smiths Bluff will soon be completed, and the line ready to test and run oil, probably within the next week or two. The line is completely welded and waiting on completion of pump stations.

GULF ORDERS MANY TRACTORS FOR PIPE LINE WORK



Twelve McCormick-Deering-Trackson crawlers and one McCormick-Deering steel-wheel tractor with Waterman backfiller composed a recent order from the Gulf Pipe Line Co., Houston, Tex., filled by the Houston branch of the Browning-Ferris Machinery Co., which is under the management of W. F. Wooldridge. Nine of the crawlers are equipped with W-K-M side booms and three with Seminole front-end winches.

Showings in Andrews County Wildcats

Two Fair Wells in Irion County Shallow Pool. Hearing on Penn Pool Proration. Upton Field Passing

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., July 7.—Gas and oil showings in two wildcat tests in Andrews County, two fair sized wells in Irion County's shallow pool, and a hearing by the Railroad Commission of the State of Texas in regard to proration of the Penn Pool, Ector County, were the main events which came out of the Permian Basin this week, while an active lease play in Reeves County came into prominence by several purchases around the old Toyah shallow field, the first field in the basin, and the one which probably was the prime factor in bringing many of the companies to the Southwest.

At a hearing of the Railroad Commission in Fort Worth this morning, in regard to prorating the Penn Pool, Ector County, there seemed to be little opposition to prorating the field, and Lon Smith of the commission said it was a most amiable meeting, his commission to take the matter under advisement and issue an order in a few days. The plan which will probably go into effect is almost identical with that which has been adopted for the Glasscock County pools, and which went into effect in that area June 30. This puts proration of the pool on a 75 per cent average potential and 25 per cent acreage basis, the acreage to be divided into 40-acre units for proration purposes. This is similar to the Yates Pool proration scheme, although that field is put on 100-acre units.

Proration Figures

Present pipe line nominations of the field are expected to be as follows: Humble Pipe Line Co., 3,000 bbls. per day; Gulf Pipe Line Co., 1,500 to 2,000 bbls. per day (its own oil); Burford Pipe Line Co., 2,500 bbls. per day and the Cosden Oil Co., 5,000 bbls. daily. The Humble is now taking around 6,000 bbls. per day, but wants only 3,000 bbls., according to its representative who testified at the meeting.

Production of the pool is now slightly over 20,000 bbls. per day from 49 wells on 25 producing 40-acre units.

Plan of changing the allowable production every 30 days will no doubt be included in the proration order which will be announced soon by the Railroad Commission.

But little storage will probably be allowed to be erected and filled in the field, for storing of oil is regarded as being wasteful, and something which the commission frowns upon, although E. A. Landreth of the Landreth Production Co., who desires to store part of his production if sufficient pipe line outlet is unavailable, testified that small losses in stored oil were realized by his company in other fields where he had more storage than many other companies. Mr. Landreth stated that 25,000 bbls. outlet daily would be necessary to care for the field properly when the new wells which will be drilled to prove up new units are completed, and although the field is now producing only 20,000 bbls. per day it will soon be making 25,000 bbls. and more, and that more outlet should be granted the producers.

A representative of the Texas & Pacific Railroad stated that negotiations are now under way for drilling a well on the right of way and the railroad officials feel they should not be under the same restrictions as a commercial producer, due to the fact that the oil will be handled differently than commercially produced oil, and that a pipe line company would not be asked to handle the oil for the railroad.

Sunray Oil Co. and Llano Oil Co.'s No. 1 Jones, in Section 6, Block 44, in the northern part of the field, one-half mile north of the nearest producer, is drilling ahead below 3,715 feet in lime without favorable prospects of making a commercial producer. It has had two showings of gas, the first at 3,490 feet and the second, estimated as 500,000 feet, was encountered from 3,525-30 feet.

Limiting the Field

Transcontinental Oil Co.'s No. 1 University, in Section 3, Block 35, the farthest test to the south in the Penn Pool, is now preparing to pump after flowing 556 bbls. in 24 hours after shot, and going dead. It failed to flow at a total depth of 3,690 feet so was given a 250-quart shot from 3,589-3,690 feet and came in making the above named amount which has been its total production so far. This well appears to be a south edge well, and a marker in this direction limiting the field to about 2½ miles in length from north to south.

Deep Rock Oil Co. and others' three tests in the Ogden area, Andrews County, are still uninteresting except for No. 1 Mathis in Section 4, Block A-46, which is making 10 bailers of oil and 14 bailers of water while drilling at 4,970 feet in lime. The water seems to be diminishing. No. 1 Miles in Section 22 is drilling at 4,615 feet in lime with no change. No. 1 King has made no change since last week, although tubing was pulled and will probably be rerun.

Penn, Humble Oil & Refining Co. and Atlantic Oil Producing Co.'s No. 1 Wilson, in the C, Section 20, Block A-37, wildcat in Andrews County, is drilling below 3,300 feet in anhydrite with 500 feet of oil and water in the hole. It formerly encountered 250,000 feet of gas and some live oil at 3,085 feet, in the same horizon which has carried showings in other tests in this area.

Fuhrman Petroleum Co.'s No. 1 Ford, in Section 16, Block A-43, topped the solid brown lime at 3,875 feet and the gray lime at 3,930 feet, about 100 feet higher than the gray lime was topped in Deep Rock's No. 1 Ogden, 10½ miles to the southeast. Elevation of No. 1 Ford is 3,186 feet. This test has also had a small gas showing and helps to make Andrews County an interesting county at the present time although the Ogden Pool is not looking so favorably, and no large production has yet been encountered in any well drilled in the county. The Ogden well continues to make around 95 bbls. per day, the oil going to storage. As the Atlantic Pipe Line Co.'s 8-inch line from Midland to Hobbs, N. Mex., is now complete and about ready to run oil, it may run a short lateral to the storage tanks at the Ogden well and take what oil has accumulated during the past several months' production of the well, for the Atlantic Oil Producing Co., co-worker of the Atlantic Pipe Line Co., is a part owner in the Ogden well.

Western Crane Test

Cranfill Brothers and Gulf Production Co.'s No. 1 Tubb, in Section 8, Block B-27, western Crane County, encountered sulphur water at 3,810 feet with an increase in water at 3,875 feet and 3,885 feet, and is now drilling below 3,920 feet in lime. As this test encountered the big lime much higher than any other test in this area it was exceedingly interesting for some time, but now looks quite discouraging. It may be carried to 8,500 feet as is rumored, but this is rather doubtful under present conditions of the industry, when the bringing in of another deep pool would be a tragedy instead of a remarkable piece of good luck.

Abandoned Upton Wells

Twenty-one old producers in the McCamey Pool, Crane-Upton Counties, were abandoned this week, most of these wells having been completed as commercial producers in 1926 and 1927 when the pool was in its prime, and the main feature of the Permian Basin, before the discovery of the Yates Pool, Pecos County, and the Hendricks Pool, Winkler County. Nine of the wells were drilled by the Marland Oil Co., now the Continental Oil Co., five were drilled by the Dixie Oil Co. which was one of the main operating companies in this area, three were drilled by the Independent Oil & Gas Co., two by the Roxana Petroleum Corp., which is now the Shell Petroleum Corp., and two by The Texas Company. Abandoning of these wells marks the passing of another oil field, the first passing of any major field in the Permian Basin.

WEST TEXAS PRODUCTION

Week ending July 5

County—	Wells	Prod.
Andrews	1	95
Crane	342	32,668
Crockett	48	1,825
Ector	49	20,415
Fisher	7	980
Garza	5	50
Howard-Glasscock	513	29,810
Irion	3	95
Jones	73	1,350
Loving	23	1,449
Mitchell	146	2,173
Pecos	472	120,650
Reagan	258	17,510
Runnels	3	15
Scurry	5	13
Taylor	2	110
Upton	248	6,255
Ward	25	2,190
Winkler	397	69,215
Total this week		306,868
Total last week		305,947
Difference		921

Irion County Completions

Straughn and Texannati Oil Co.'s No. 1 Nutt in the NW NW, Section 6, Gonzales County School Lands, in the shallow area production of Irion County, has been completed for one of the best wells of the pool, and is increasing daily in production, something new for wells of this area. It came in for an initial production of 105 bbls. and has made as high as 115 bbls. since coming in at a total depth of 1,449 feet. Top of the pay is 1,439 feet. Another well in this area which is showing up for around 100 bbls. per day is Carl Cromwell and others' No. 3 J. M. Nutt in the same section and survey. It topped the pay at 1,444 feet and was drilled to 1,457 feet where it has been swabbing. Daily average production of Irion County should show a gain from 95 bbls. per day this week to around 295 bbls. on the next production report, this oil being high gravity and sweet, bringing around $1.03 per barrel.

Howard-Glasscock County fields were put on a new proration plan effective June 30, the western side of the fields to be prorated similar to the Yates Field on a 75 per cent average potential and 25 per cent basis with 40 acres as proration units.

Total potential of the west field is 50,144 bbls., the average potential being 38,176 bbls. The Coffee-Phillips Fields have been prorated into 5,970 bbls. per day, being the amount the pipe line companies connected to the field elect to take during July 1 to July 16. The Roberts-Settles Fields are prorated into 11,396 bbls. per day being the amount the pipe lines connected to the field elect to take during the same period.

The Independent Oil & Gas Co. and Rowan and Tong, discoverers of the one well in the McDonald area, Section 46, Block 12, H.&G.N., are to drill another well in this section, this being the fourth well they will have drilled in the section. No. 1 well was the only producer brought in in this area, and it went dry after producing around 5,000 bbls.

Eastland Oil Co., Dunnigan and Hyer's

(Continued on Page 73)

WILDCAT OPERATIONS IN WEST TEXAS

Week Ended July 7

ANDREWS COUNTY

Company, well, farm, name, section and block—	Remarks—
Deep Rock Oil Co. et al's No. 1 Mathis, 900 ft. from S and W. Sec. 4, Blk. A-46, Public School Land	Est. 1,500,000 ft. gas; ¾ bbl. oil per hour; show gas 4,166 ft.; show oil 4,185 ft.; increase at 4,281 ft. and 4,351 ft.; drlg. 4,882 ft.; sulphur water 4,719-26 ft. and increase at 4,780 ft.
Deep Rock Oil Co.'s No. 1 Miles, 990 ft. S, 1,650 ft. E of NW cor., Sec. 22, Blk. A-46, School Land	Show oil 4,240 ft. and 4,270 ft.; shut down 4,587 ft.; hole full water at 4,570-76 ft.
Fuhrman Pet. Corp.'s No. 1 Ford, 440 ft. from S and 2,200 ft. from W of Sec. 16, Blk. A-43, Public School Land	Shut down 8,962 ft.
Deep Rock Oil Co. et al's No. 1 King, 330 ft. from N and 2,310 ft. from E. Sec. 11, Blk. A-46	Top pay 4,335 ft.; swabbed 476 bbls.; total depth 4,454 ft.; 3,500 ft. oil in hole; now agitating; swabbing 60 bbls. daily; pulled tubing; no production.
Maer & Staniforth's No. 1 Meador, C SW Sec. 8, Blk. A-41	Rigging up.
R. R. Penn's No. 1 Wilson, C, Sec. 20, Blk. A-37, School Blk.	Drlg. 3,115 ft.; 500 ft. oil in hole; show oil and gas at 3,085 ft.

BREWSTER COUNTY

Brewster Oil Co.'s No. 1 Fee, 2,640 ft. S and 2,598 ft. E of NW cor., Sec. 45, Blk. G-15, G.C.&S.F. Sur.	Shut down 1,935 ft.
E. L. Chapman's No. 1 Skinner, C SW SE, Sec. 100, Blk. 2, G.C.&S.F. Sur.	Shut down 1,250 ft.; hole full water 1,135-85 ft.
Trans-Pecos Oil & Gas Co.'s No. 1 Jones, 920 ft. from N and 2,500 ft. from E of Sec. 18, Blk. G-15, G.C.& S.F.R.R. Sur.	Show oil 1,830 ft.; shut down 2,345 ft.
Van McPhail's No. 1 McIntyre, SE cor., Sec. 59, Blk. 352, 7 mi. S of Alpine	Shut down 1,750 ft.

COKE COUNTY

Arkansas Fuel Oil Co.'s No. 1 Stepp, 1,020 ft. NE, 2,340 ft. W of SE cor., Sec. 35, Blk. 1-A, H.&T.C. Sur.	Drlg. 3,360 ft.
Lipan Oil Co.'s No. 1 E. C. Rawlings, Sec. 390, Blk. 1-A, H.&T.C. Sur., elev. 2,750 ft.	Shut down 3,278 ft.; show live oil 3,275-78 ft.

(Continued on Page 110)

VEZ

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Big Spring, Texas · Shawnee, Oklahoma · Benavides, Texas
Luling, Texas · Wewoka, Oklahoma · Borger, Texas
Pampa, Texas · Bristow, Oklahoma · Wink, Texas
Tullos, Louisiana
Wichita, Kansas

New White Deer Pool Discouraging

Wildcat in Young County May Open New Producing Area. Semi-wildcat Showing for 200-Bbl. Well. Lloyd Pool Completion

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., July 7.—Carson County's new pool west of White Deer, which was first opened up by the discovery of Empire Gas & Fuel Co.'s No. 1 Fields in Section 13, Block 7, I.&G.N. Survey, looks exceedingly discouraging at this time as the Empire's No. 2 Fields, in the same section, is showing up as a small well, and other tests in offset sections appear as failures. Cockrell-McIlroy Oil Co.'s No. 1 Simms in Section 11, same block and survey, was completed this week as a 42,000,000-foot gasser at a total depth of 3,460 feet. It was plugged back to 3,160 feet. Shamrock Oil & Gas Co.'s No. 1 Thompson in Section 15, Block 7, is shut down at 3,404 feet after having had a fair showing of oil and gas at 3,234 feet.

Panhandle and Wichita Falls operators who are now being served by the Prairie Pipe Line Co. are feeling the new ruling posted by that company. Although production in the Newcastle area of Young County has been curtailed to 2,500 bbls. per day, whereas the area could produce at least 10,000 bbls. daily, other areas in this county have been given warning that a reduction in runs would be made. Prairie is the only pipe line company now serving the New Castle area, which is the most active in the Wichita Falls district. Several wells were completed there this week, but they were all shut in waiting for pipe line connection.

Young County Wildcat

Nash & Windfohr, who some time ago brought in a phenomenal well in the Graham Pool, Young County, now have a wildcat drilling on the Graham estate, 10 miles south of New Castle, which looks good for a commercial producer and opening up another producing area in this county. Six and five-eighths inch casing is now being run in the well, which is bottomed at 2,260 feet. It looks good for a 50-bbl. well as it stands.

The Greene Oil & Refining Co.'s No. 1 Morgan, about 2½ miles northwest of the Nash and Windfohr deep producer in the Graham Pool, Young County, is a semiwildcat showing good for a 200-bbl. well at 3,850 feet, where it is now shut down to run 6⅝-inch casing. A hole full of cavings will have to be cleaned out and storage tanks set before a test can be made.

The Prairie Oil & Gas Co. and Amerada Petroleum Corp. completed their second producer in northwestern Palo Pinto County in the area opened several months ago by the completion of its No. 1 Vick in the L. J. Pitts Survey. Their second well was completed for an initial production of 50 bbls. at a total depth of 1,674 feet, but which was plugged back to 1,673 feet. Top of the pay in this well was logged at 1,670 feet. The Prairie Pipe Line Co. is taking the oil from both wells.

Mid-Tex Oil Co.'s No. 1 Windham in the G. W. Denton Survey No. 1,370, in the southwest part of Callahan County,, is not coming through as a commercial producer at its present total depth of 4,450 feet. It formerly topped the pay at 4,349-53 feet and put 200 bbls. in storage, but on a 12-hour swabbing test made only 17 bbls., and will probably be plugged.

Panhandle Decrease

The Panhandle district showed a big decrease of 3,295 bbls. daily production this week due to flush producers falling off, and but few completions in the district, practically all of those being small producers, or gas wells. The Ranger district also fell off 1,264 bbls. in daily average, with but six small oil producers and two small gassers added to the production figures, all the rest of the completed tests being dry holes. The Lloyd Pool, south of Santa Anna in Coleman County, scored another well in Lloyd Oil Corp.'s No. 12 Bartholomew, which came in for 70 bbls. initial production at a total depth of 1,457 feet.

This pool was formerly one of the most active and interesting pools in Coleman County and the Ranger district, but gradually subsided until the past few weeks have seen but little activity in it, and but few wells completed during the past four months.

The Overall Pool of this county has been producing around 614 bbls. from 20 wells during the past seven days.

The George Pool, Brown County, has been averaging about 340 bbls. daily from 51 wells.

WICHITA FALLS COMPLETIONS
Week ending July 5

Archer County

Arkansas Fuel Oil Co.'s No. 1 Llewellyn, dry and abandoned; total depth 1,502 feet. Barnsdall Oil Co.'s No. 16 Wilson, oil sand 1,713 feet; initial production 20 bbls. oil and 70 bbls. of water; total depth 1,714 feet. Barnsdall and Heydrick-Camp's No. 1 Parkey, dry and abandoned; total depth 1,750 feet. L. T. Burns' No. 2 Wilson, oil sand 1,453 feet; initial production 40 bbls.; total depth 1,469 feet. L. T. Burns' No. 1 Harmel, oil sand 1,416 feet; initial production 12 bbls.; total depth 1,425 feet. F. P. Cullum's No. 1 Falls Co. fee, initial production 42 bbls.; total depth 1,139 feet. Fain & McGaha Oil Corp.'s No. 1 Hamilton, dry and abandoned; total depth 1,148 feet. Heydrick & Hickman's No. 1 Abercrombie & Taylor, dry and abandoned; total depth 1,502 feet. C. E. Litchfield and others' No. 1 Fondville, location abandoned. Julian Oil Co. and others' No. 1 Wilson, dry and abandoned; total depth 1,722 feet. J. H. Massie's No. 2 Echols, oil show 1,349-51 feet; initial production 35 bbls.; total depth 2,351 feet.

Jack County

Hammon & Garrett's No. 1 Booth, dry and abandoned; total depth 2,523 feet. Magnolia Petroleum Co.'s No. 1 Rankin, total depth 3,403 feet; plugged back to 3,010 feet and shot 2,993-3,003 feet; initial production 25 bbls.

Wichita County

Moran Drilling Co.'s No. 1 Chilson, dry and abandoned; total depth 1,850 feet. R. R. Clark and others' No. 1 Bickley, dry and abandoned; total depth 2,006 feet. Stidham & Thrasher's No. 1 Kemple, dry and abandoned; total depth 2,009 feet.

Young County

Akin & Rayzor's No. 1 Winkler, oil show 1,071-91 feet; initial production 86 bbls.; total depth 1,091 feet. M. A. Anderson's No. 1 Castleman, dry and abandoned; total depth 1,420 feet. W. S. Brayzelton and others' No. 3 Larimore, dry and abandoned; total depth 760 feet. W. S. Brayzelton and others' No. 4 Larimore, oil sand 696-722 feet; initial production 403 bbls.; total depth 722 feet. W. S. Brayzelton and others' No. 5, oil sand 702-12 feet; initial production 360 bbls. flowing; total depth 712 feet. G. B. Chandler's No. 1 Carpenter, oil sand 1,025-35 feet; initial production 60 bbls.; total depth 1,035 feet. Klinner & Riggs' No. 1 Larimore, oil sand 681-720 feet; initial production 960 bbls.; total depth 720 feet. C. A. Narmont's No. 1 Smiley, dry and abandoned; total depth 1,125 feet. E. R. Riggs' No. 9 Larimore and others, oil show 694-713 feet; initial production 1,000 bbls. flowing; total depth 713 feet. E. R. Riggs' No. 10 Larimore, total depth 711 feet; oil sand 689-711 feet; initial production 600 bbls. flowing. E. R. Riggs' No. 12 Larimore, oil sand 698-713 feet, flowed 700 bbls.; total depth 713 feet. O. H. Simpson and others' No. 1 Larimore and others, oil sand 685-709 feet; initial production 310 bbls.; total depth 709 feet. A. O. Disney's No. 1 Belknap Coal Co., dry and abandoned; total depth 700 feet. Lewis-Groves' No. 1 Groves, location abandoned. Independent Oil & Gas Co.'s No. 3 Larimore, oil sand 692-716 feet; initial production 364 bbls. flowing; total depth 719 feet. Same company's No. 4 Larimore, oil sand 696 feet; initial production 432 bbls. flowing; total depth 717 feet. Same company's No. 6 Larimore, oil sand 692 feet; initial production 682 bbls. flowing; total depth 712 feet. Same company's No. 8 Larimore, oil sand 709-22 feet; total depth 727 feet; plugged back to 722 feet, shot with 20 quarts; initial production 210 bbls. Same company's No. 9 Larimore, oil sand 692 feet; initial production 700 bbls. flowing; total depth 719 feet.

Long and others' No. 1-C Williams, top of pay 2,457 feet; initial production 489 bbls.; total depth 2,509 feet. Pitzer & West's No. 1 Callahan, total depth 3,930 feet; plugged back to 3,925 feet; shot 70 quarts 3,755-90 and 70 quarts 3,790-3,815 feet; initial production 20 bbls. Roeser & Pendleton and others' No. 1 Arnold, dry and abandoned; total depth 3,805 feet. O. H. Simpson and others' No. 2 Larimore, total depth 726 feet; dry and abandoned. M. E. Smith and others' No. 1 Barnett and others, dry and abandoned; total depth 1,104 feet. Smith-Archer Oil Co.'s No. 1 Watson, dry and abandoned; total depth 777 feet. Westheimer & Daube's No. 4 Larimore and others, oil sand 698-715 feet; initial production 400 bbls. flowing; total depth 715 feet. Westheimer & Daube's No. 5 Larimore, oil sand 689-705 feet; initial production 150 bbls.; total depth 713 feet. Young Brothers & Alexander's No. 1 B. H. Larimore, dry and abandoned; total depth 723 feet.

NORTH TEXAS PRODUCTION

Panhandle district—	Prod.
Carson County	9,315
Hutchinson County	22,770
Gray County	72,055
Moore County	360
Potter County	10
Wheeler County	675
Total this week	105,185
Total last week	108,380
Decrease	3,195
Wichita Falls district—	
Archer County	18,885
Baylor County	1,385
Clay County	760
Cooke County	3,480
Foard County	190
Jack County	3,530
Haskell County	60
Montague County	6,855
Throckmorton County	1,052
Wilbarger County	23,810
Wichita County	25,285
Young County	22,520
Total this week	107,712
Total last week	107,717
Decrease	5
Ranger district—	
Brown County	6,610
Callahan County	3,800
Coleman County	3,575
Comanche County	280
Palo Pinto County	626
Eastland County	5,500
Shackelford County	5,715
Stephens County	5,755
Total this week	31,961
Total last week	33,225
Decrease	1,264

RANGER DISTRICT COMPLETIONS
Week Ending July 5

Brown County

W. G. Sawyer's No. 4 White, dry and abandoned 1,333 feet, formerly a producer, deepened and abandoned.

Callahan County

Colgin & Johnson's No. 2 Cutbirth and others, dry and abandoned; total depth 800 feet. McCarter and others' No. 20 Dom, dry and abandoned; total depth

(Continued on Page 74)

WILDCAT OPERATIONS IN TEXAS PANHANDLE
Week Ending July 7

CARSON COUNTY

Company, well, farm, name, section and block—	Remarks—
Danciger O. & R. Co.'s No. 1 Block, 330 ft. N and E lines, Sec. 112, Blk. 4, I.&G.N. Sur.	S.D. 2,995 ft.
Empire G. & F. Co.'s No. 1 Archer-B, 330 ft. N and E, SW cor. SW, Sec. 139, Blk. 3, I.&G.N.R.R. Sur.	Location.
Empire G. & F. Co.'s No. 2 Fields, 990 ft. N and W, Sec. 13, Blk. 4, I.&G.N. Sur.	Drlg. 3,302 ft; T.P. 3,228 and 3,246 ft; I.P. 234 bbls. first 24 hrs. and 152 bbls. second 24 hrs.
Gibson Oil Corp.'s No. 1 Moore, 990 ft. N, 330 ft. E, N½, SE, Sec. 20, Blk. 7, I.&G.N. Sur.	Drlg. 2,500 ft.
Reiger & Steckoll's No. 1 Martin, 330 ft. N and W, SW. Sec. 90, Blk. 7, I.&G.N. Sur.	S.D. 1,100 ft.
Shamrock O. & G. Co.'s No. 1 Thompson, 330 ft. S and W lines, E 80 ac., NE, Sec. 5, Blk. 7, I.&G.N. Sur.	17,000,000 ft. gas 2,755 ft; drlg. 3,348 ft; T.P. 3,171 ft; swbd. 16 bbls. on test.
Shell Pet. Corp.'s No. 1 Percival, 330 ft. N and E, SE, Sec. 199, Blk. 3, I.&G.N. Sur.	Drlg. 3,190 ft.
Suloch Oil Co.'s No. 1 Bost, 990 ft. S, 330 ft. E, SW, Sec. 1, Blk. S.&F.	Drlg. 2,980 ft.
Sweeney et al's No. 1 Locke, 164 ft. N and W, 40-ac. tr. along R.R. in Sec. 57, Blk. 7, I.&G.N. Sur.	S.D. 1,000 ft.
Texas Interstate P. L. Co.'s No. 1 Burnett, 1,320 ft. N, 660 ft. W, of W 480 ac., Sec. 99, Blk. 5, I.&G.N. Sur.	Drlg. 2,615 ft.
Texas Interstate P. L. Co.'s No. 2 Burnett, C NE, Sec. 77. Blk. 5, I.&G.N. Sur.	Rig.

CHILDRESS COUNTY

Continental Oil Co. and Sun Oil Co.'s No. 1 Johnson, 660 ft. NE, Sec. 580, Blk. H, W.&N.W. Sur.	Drlg. 3,625 ft.
C. L. Sloane et al's No. 1 B. P. Smith, Sec. 49, F. P. Knott lands	T.D. 5,000 ft.

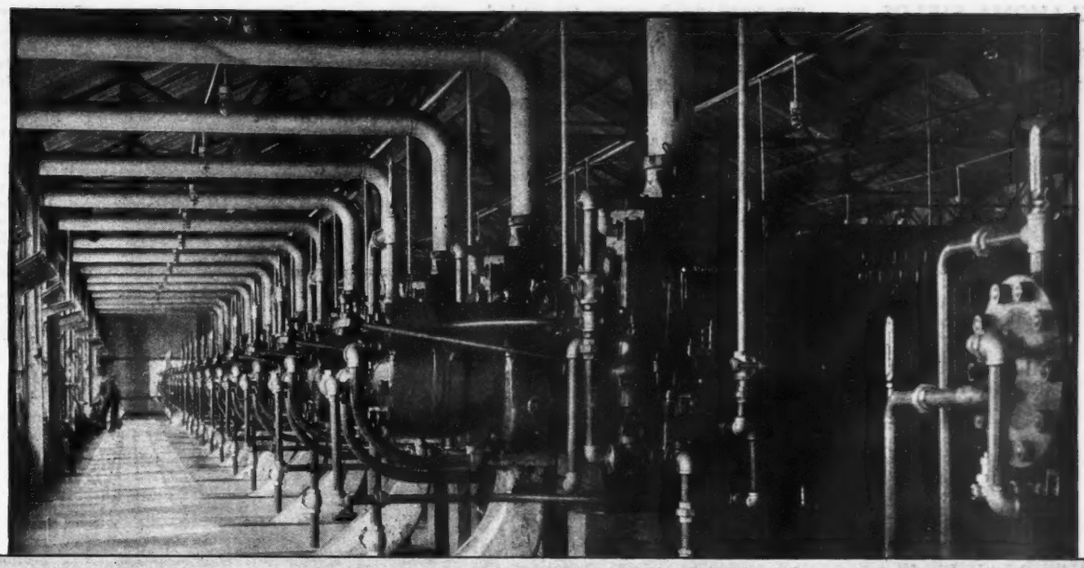
COLLINGSWORTH COUNTY

Shope Bros.' No. 1 Aldus, 410 ft. N, 330 ft. E, Sec. 96, Blk. 16, H.&G.N.R.R. Sur.	Show oil and gas 1,678 ft.; bailed estimate 10 bbls. first day from G.W. 2,194-98 ft; S.D. 3,000 ft.
Shoupe Bros.' No. 1 Whitson, 330 ft. N and E, SW, Sec. 33, Blk. 12. H.&G.N.R.R. Sur.	Rig.

DONLEY COUNTY

Blue Bonnett Oil Co.'s No. 1 Ball, 1,075 ft. N line, 955 ft. E line, Sec. 22, Blk. E, D.&P.R.R. Sur.	T.D. 3,006 ft.; contract depth.
Marine Oil Co.'s No. 1 Sawyer, C SW, Sec. 5, Blk. G, G.C.&S.F. Sur.	S.D. 4,025 ft.

(Continued on Page 113)



Interior of the Yates Pool station of the Humble Oil & Refining Co., in Pecos County, Texas. The Clark engines in this gasoline plant are equipped with Robert Bosch Super-Energy Magnetos.

M.R.T. produces 20,000 gallons of gasoline daily

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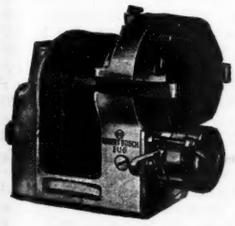

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OKLAHOMA FIELDS

(Continued from Page 42)

feet from a total depth of 2,406 feet to shut off the water and then swabbed 75 bbls. a day. Sunray Oil Co. and Homaokla Oil Co.'s No. 9 Ritchie, SE cor., Section 1-4-7, Pontotoc County, was testing a sand at 1,968-72 feet with a showing of oil.

Cement Extension

The new extension well in the Cement Pool in Caddo County continues to flow while cleaning out. Mid-Kansas Oil & Gas Co. and Ramsey Petroleum Co.'s No. 9 Wade, SW cor. SE SW, Section 2-5-9w, on the east side of the Cement Pool, had sand at 4,082-92 feet, where the oil was found. It is the deepest producing horizon yet found in the area and opens a new pay sand for that part of the State. The well flowed 192 bbls. of oil on the gauge of July 5, while the crew was rigging up the cable tools to clean out. It is believed to be bridged near the top of the sand. Magnolia Petroleum Co.'s No. 4 Gregory, SE cor. NW SW, Section 31-6-9w, on the west side of the pool, swabbed 40 bbls. of oil from a total depth of 3,342 feet. The crew was preparing to drill deeper.

In the Orlando District

Payne County is due for some new wells in the Orlando district. Two deep tests are to be drilled into the pay horizon some time next week. Tidal Oil Co. and Gardner Petroleum Co.'s No. 1 Edwards, C SE NE, Section 13-19-1w, Payne County, is waiting for cement to set at 4,670 feet. Reiter-Foster Petroleum Corp. and others' No. 1 Rule, C NW NE, Section 8-19-1w, Payne County, is shut down waiting for cement at 4,687 feet. These two tests are expected to reach the pay horizons by next week. The same operators' discovery well, No. 1 Finnell, C NE NW, Section 8-19-1w, is making about 300 bbls. a day with the production pinched. Same operators are drilling another test in the SE cor. SW, Section 5-19-1w, which is drilling at 4,500 feet. Several other tests are drilling in the vicinity.

Konawa Pinched In

The Konawa Pool in the southern part of Seminole County, averaged 42,245 bbls. on the gauge of July 3, with many of its completed wells off production and some of the others being pinched by the proration plan. The Mid-Continent Petroleum Corp. had 13,765 bbls. of this production from four wells. The new well of the Mid-Continent, its No. 3 Harjo, in Section 20-6-6, made 2,700 bbls. in four hours from the Cromwell sand. Shell Petroleum Corp.'s No. 1 Caesar, NW cor. SE SE, Section 20-6-6, the largest well in the Konawa Pool, made 11,920 bbls. wide open on the same day's gauge.

Big Well in West Chandler

West Chandler area has another big Wilcox sand producer. The newest producer in the West Chandler Pool, in Lincoln County, is the Prairie Oil & Gas Co.'s No. 3 Norton, SW cor. NE, Section 7-14-4. It had the Simpson sand at 4,995-97 feet, where it made 255 bbls. the first hour and 5,607 bbls. the first 24 hours. It ranks with the largest wells yet completed in the pool. The Magnolia Petroleum Co.'s No. 1 Benedict, SE cor. NW, Section 7-14-4, is the largest well completed in the pool. It made 6,318 bbls. on the gauge of July 2, and was pinched to 2,160 bbls. on the next day's gauge. Tom Slick Oil Co.'s No. 1 fee, NE cor. SW, Section 7-14-4, Lincoln County, produced 2,057 bbls. from a total depth of 5,107 feet, with a showing of water. It is being plugged back to 5,102 feet to shut off the water.

Fire in the Okfuskee County area destroyed two derricks, which are now being rebuilt, five other rigs were also damaged. The fire occurred when the Sunray Oil Corp. and others' No. 5 Holmes, SW cor. NW SW, Section 22-12-11, found gas at 1,775-1,800 feet, the test had what was estimated to be 30,000,000 feet of gas. A stone that came with the gas struck an electric light bulb and ignited the gas. The Sheldon Oil & Gas Co. and W. R. Staples, SE cor. NE, Section 21-12-11, became ignited at a total depth of 2,320 feet, where a stray gas was found which caught fire and destroyed part of the rig.

Oklahoma City's Shut-In Production

The initial production of the shut-in wells in the Oklahoma City Pool that have been allowed to produce for 24 hours or less as of July 5, and are now shut in for the proration period, was 637,553 bbls. The initial production and the approximate dates each well will be opened for its regular producing period follows:

I. T. I. O.:			
Sudik	*1	[13]30,000	.....
Salsman	*2	4,205	7- 8-30
N. Emerson	*5	[22]2,830	7-12-30
H. W. Jones	*2	[21]2,290	7-13-30
E. Trosper	*2	[15]15,000	7-13-30
B. Johnson	*4	[2]2,334	7-13-30
N. Emerson	*8	[24]4,052	7-14-30
N. Emerson	*10	[6]855	7-15-30
C. E. Trosper	*1	20,016	7-16-30
Salsman	1	[23]304	7- 8-30
Precure	1	[10]10,000	7- 9-30
L. Jones	3	10,184	5-29-30
H. W. Jones	2	24,586	7- 8-30
Trosper Hughes	*1	[3]3,000	8- 7-30
Jones Community	*2	17,164	8- 5-30
Jones Community	3	[10]10,000	7- 9-30
A. Brokaw	4	[32]32	8- 6-30
N. Emerson	*7	1,687	8- 5-30
C. Brokaw	3	11,303	8- 4-30
Theimer	*3	[21]10,540	8- 7-30
Precure	*1	[12]385	8- 7-30
Trosper	*11	4,285	8- 8-30
N. Emerson	*9	3,274	8- 7-30
L. Jones	*7	2,463	8- 7-30
M. Uncil	*2	2,050	8- 4-30
Salsman	*4	[30]225	8-14-30
M. Fuzzell	3	6,301	8-21-30
G. Button	5	[9]9,000	8-21-30
Trosper Park	*6	[5]5,000	8-21-30
E. Trosper	*1	[16]6,271	8-20-30
Jones	*10	[2]2,604	8-19-30
L. Farley	4	7,395	8-18-30
Mary Sudik	*4	[25]13	8-27-30
Canfield Button	3	[6]6,494	8-28-30
School Land	*2	[18]4,482	8-27-30
School Land	*1	[4]4,734	8-27-30
School Land	*3	[27]7,734	9- 2-30
S. Peterson	*2	[7]6,327	9- 2-30
A. Brokaw	*3	[2]2,195	9- 1-30
C. Trosper	*2	[17]1,970	9- 1-30
Johnson	*5	2,406	8-31-30
Farley	*1	6,408	8-30-30
Mary Sudik	*7	[5]5,169	9- 3-30
W. Franklin:			
Theimer	*3	16,690	8- 7-30
Lowery	*8	[10]10,000	8-20-30
Wright	*1	5,805	8-27-30
Cromwell:			
Trosper Park	*18	[8]1,902	7- 7-30
Trosper Park	16	[2]268	7- 8-30
Trosper Park	*17	17,953	8- 7-30
Trosper Park	*15	5,240	8-13-30
School Land 54	12	[12]2,000	8- 8-30
School Land 54	8	[10]10,000	8- 8-30
School Land 54	*3	4,420	8-13-30
School Land 54	*4	[9]9,050	8-14-30
Trosper Park	*6	11,921	8-30-30
Sinclair:			
Vincl	*4	[22]385	7- 5-30
Kinter	10	115	8- 4-30
Vincl	*5	[25]5,730	8-14-30
Vincl	*8	[3]2,720	8-14-30
School Land 67	*2	6,770	8-14-30
School Land 54	7	[8]8,000	8-30-30
Vincl	*11	31,290	8-30-30
School Land 54	*13	7,150	8-20-30
School Land 54	*10	17,220	8-30-30
School Land 67	*3	15,940	8-29-30
School Land 54	*16	[28]8,145	9- 1-30
Vincl	*9	[21]1,115	9- 2-30
Coline:			
Olds	*9	[4]1,169	7- 7-30
Olds	*7	2,490	7- 8-30
Warren	9	5,544	8- 8-30
Clauer	1	[4]1,203	8- 1-30
Warren	8	9,298	8- 4-30
Olds	*10	[2]2,119	8- 2-30
Olds	*11	[11]1,284	8-15-30
Clauer	6	5,596	8-28-30
Olds	*7	[21]1,763	8-28-30
Clauer	*10	[4]4,000	9- 1-30
Slick:			
Hoopes	*5	[8]815	7- 6-30
Hoopes	*6	2,237	7- 8-30
Houghton	1	16,924	6-21-30
Bailey	1	10,358	6-18-30
Martin	1	[10]10,045	7- 9-30
Hoopes	*7	3,995	8- 1-30
Dunivan	*1	[13]13,482	8-15-30
Hoopes	*8	798	8-14-30
Carter	*1	[9]9,891	8-16-30
Townsend	*1	[4]4,798	8-16-30
Clasen	*1	[31]1,711	8-29-30
Foote	*1	[10]10,000	8-27-30
Keenan & Co.:			
Cunningham	*2	[12]2,000	8-11-30
Skelly:			
Hoopes	*6	[5]441	7- 7-30
Hoopes	8	12,339	7-10-30
Mid-Texas:			
Community	*1	[23]3,000	8- 6-30
Tom Slick Oil Co.:			
Hoopes	*8	[26]572	8- 5-30
Hall & Briscoe:			
Holmes	*1	[9]9,743	7-31-30
Prairie:			
Hiddleston	9	[19]4,310	8-20-30
Jack Shaffer et al:			
Jones Community	1	2,345	8-21-30
Hall & Briscoe:			
Lindsay	2	[29]384	9- 1-30
Total	95	637,553	

*Wells producing from the Simpson sand. All others are producing from the Arbuckle lime.

[1]Estimated. [2]Thirteen hours. [3]Fifteen minutes. [4]Twelve hours. [5]Five hours. [6]Eighteen hours. [7]Sixteen and one-half hours. [8]Seventeen hours. [9]Twenty and one-half hours. [10]Twenty-one hours. [11]Sixteen hours. [12]Twenty-three and one-half hours. [13]Eight and one-half hours. [14]Thirteen hours and fifty-five minutes. [15]Thirty minutes. [16]Eleven and one-half hours. [17]Fifteen hours. [18]Three hours. [19]Nineteen hours. [20]Fifteen and three-quarter hours. [21]Eighteen and one-half hours. [22]Six hours. [23]One hour. [24]Fifteen and one-half hours. [25]One hour and twenty minutes.

These notations indicate the number of hours the wells produced on their initial production test.

Greater Seminole Production

The production from the Greater Seminole area shows a decline for the week ending June 30. It is the first decline in the area for several weeks. The total daily production was 292,099 bbls. The Seminole Field averaged 206,707 bbls. from 1,885 wells. The daily average gauges from the different pools in the Greater Seminole area were as follows:

Pool—	Wells	Bbls.
Little River	372	32,257
East Little River	82	14,828
Carr City	57	6,989
Maud	138	4,399
Mission	104	11,312
Bowlegs	280	20,972
Earlsboro	291	25,674
East Earlsboro	155	36,051
South Earlsboro	23	18,560
Seminole City	266	21,106
East Seminole	33	3,323
Searight	84	11,236
Allen	267	19,518
Asher	26	1,630
Konawa	84	24,599
St. Louis	487	28,710
Sasakwa	53	7,627
Total	2,811	292,099

Greater Seminole Oil Shipments

A decline of 1,000 bbls. a day is noted in the total pipe line and tank car shipments from the Greater Seminole area. The total shipments were 268,675 bbls. for the week ending July 2. The daily average shipments by companies were as follows:

Company—	Seminole (bbls.)	Asher, Pearson, St. Louis (bbls.)	Konawa (bbls.)
Barnsdall	3,401	....	....
Champlin	5,093	....	495
Continental	280	....	....
Consolidated	360	719	....
Cosden	10,927	40	2,662
Deep Rock	5,131	635	....
Empire	4,958	....	....
Gulf	23,328	2,766	463
Independent	....	865	....
Magnolia	11,174	7,878	....
Oklahoma	30,750	....	411
Prairie	14,323	5,268	8,322
Prod. & Ref.	2,299	....	....
Pure	4,441	....	....
Shell	14,711	2,912	2,840
Sinclair	41,912	8,695	1,321
Texas	17,510	240	4,246
Tidal	13,542	5,476	....
White Oak	1,538	....	....
Total	205,679	35,484	20,660
Tank cars	6,852		
Grand total	212,531		

The daily gauges from the Oklahoma City Pool for the last seven days ending July 8, showing the date, number of barrels produced each day, number of wells on production, and the total number of wells completed each day, were as follows:

Date—	Bbls.	Wells prod.	Total comp.
July 1	93,244	53	322
July 2	68,729	41	323
July 3	121,649	44	327
July 4	88,123	48	328
July 5	68,677	40	331
July 6	94,372	45	335
July 7	69,916	43	336

Beckham County

Ramsey Petroleum Co. and others' rig is up for No. 1 Becker, C NE NE, Section 27-9-23w.

Caddo County

Mid-Kansas and Ramsey Petroleum Co. made location for No. 3 Surbeck, SE cor. SW SW, Section 2-5-9w. Magnolia Petroleum Co. is moving the tools in for No. 3 Lacky, NW cor. NE NW, Section 11-5-9w. Location has been made for No. 4 Lacky, NE cor. NW, Section 11-5-9w. Mid-Kansas Oil & Gas Co. and Ramsey Petroleum Co.'s No. 4 Jones, SW cor. SE, Section 31-6-9w, has been completed for 46 bbls. in sand 3,276-83 feet.

Creek County

Root and others moved a machine in for No. 2 Tiger, SE cor. NW NW, Section 20-19-9. J. H. Winemiller staked location for No. 1-A Sapulpa, SW cor. SE, Section 33-18-11. A. B. Pugh and others made location for No. 1 Biggs, NE cor., Section 15-17-9. A. B. Ice's No. 11 Fulsom, CNL SW SW, Section 13-17-10, is spudding. Curtis Oil Co. and Margay Oil Co.'s No. 1 Mooney, SW cor. NE, Section 27-16-10, is rigging up to deepen from 2,486 feet. S. J. Mathews' No. 1-A Hughes, NE cor., Section 21-16-11, is being deepened from 2,247 feet. F. R. Billingslea's No. 3 Knight, SW cor. NE SE, Section 16-15-8, is spudding. Bert Swift and others' No. 1-A Primer, NW cor. SE, Section 4-19-9, is dry and abandoned at 2,832 feet. Jackson & Wise's No. 1 Halsey, NE cor. SE SE, Section 28-19-9, has been abandoned at 2,380 feet. Shell Petroleum Corp.'s No. 7 Bruce, SW cor. NE, Section 10-17-9, had sand 2,004-33 feet, shot 40 quarts and made 40 bbls. C. A. Mechling's No. 1-A Daniel, NW cor. SE NE, Section 32-17-11, has been abandoned at 2,400 feet. E. A. Hill and others' No. 1-A McIntosh, NW cor. SW NE, Section 29-15-10, is dry and abandoned at 3,275 feet.

Cotton County

Shasta Oil Co. is moving tools in for No. 1 McMillian, C SE SE, Section 2-4s-13w. Shasta Oil Co.'s No. 4 Moore, SW cor. SE NW SW, Section 2-2s-10w, is drilling at 100 feet. Peckham & Patterson has the rig up for No. 2 Moore, SE cor. NW SW, Section 2-2s-10w. Cole & Colvert's No. 1 Grossman, SW cor. NE SE, Section 27-2s-11w, has been abandoned at 2,510 feet. Shasta Oil Co.'s No. 7 Cobb, NE cor. NW SE NE, Section 2-2s-10w, has been completed for 100 bbls. in sand 2,168-94 feet.

Grady County

Natural Gas Producing Corp.'s rig is up for No. 1 Miller, C W half E half W half, Section 25-4-8w.

Jefferson County

Farland Oil Co.'s No. 1 Riverbed, SW cor. SE SE, Section 3-7s-5w, an old well, is drilling deeper at 1,150 feet.

Hughes County

The Prairie Oil & Gas Co.'s No. 1 Gammill, NW cor. SW NW, Section 27-9-10, has been completed for 3,500,000 feet of gas and 15 bbls. of oil in Cromwell sand 3,105-22 feet.

Kiowa County

McWirter and others' No. 2 Menton, SW cor. NW, Section 4-6-16w, has been abandoned at 936 feet.

Oklahoma County

Anderson & Prichard made location for No. 5 Roosevelt Place, SE cor. NW NE, Section 2-11-3w, Oklahoma City Pool. Location has also been made for No. 6 Roosevelt Place, SW cor. NE NE, Section 2-11-3w. Ghant-Garvin's No. 1 Harris, SW cor. NE NW, Section 2-11-3w, is setting surface pipe. Location has been made for No. 1 Olafson, NE cor. NW SW SW, Section 2-11-3w. Oils, Inc.'s No. 1, Block 2, Lot 15, Armourdale Addition, SW cor. NW NW, Section 2-11-3w, is a rig. Acme Oil Co. made location for No. 1 Armourdale, Lot 20, Block 2, NW cor. SW NW, Section 2-11-3w. British American Oil Co. has the rig up for No. 1 Eckroat, NW cor. SE SE NW, Section 10-11-3w, Block 13, Lot 7, Eckroat Addition. J. E. Mabee has the cellar dug for No. 1 Community, Block 12, Lot 5, South Highlands Addition to Patterson Addition, SW cor. SE NE, Section 10-11-3w. Spears Drilling Co. is erecting the rig for No. 1 Wheeler School, CNL NW SW NW SE, Section 10-11-3w. Hall & Briscoe's No. 5 Holmes, NE cor. SW NW SE, Section 10-11-3w, is a cellar. Indian Territory Illuminating Oil Co. made location for No. 8 Coppinger, NE cor. NW NE NW, Section 11-11-3w. Oklahoma City Petroleum Co. has the cellar dug for No. 1 Lively, NE cor. NW SE, Section 15-11-3w. Griggs Oil Co. made location for No. 1, Block 1, Lot 49, Craig Addition to Fruitland Addition, SW cor. NW NW SE, Section 15-11-3w. Sinclair Oil & Gas Co. made location for No. 7 School Land No. 67, NE cor. NW SE, Section 36-11-3w.

Wirt Franklin Petroleum Corp.'s No. 3 Theimer, SE cor. NE SE, Section 2-11-3w, has been completed for 2,784 bbls. in sand 6,427-6,506 feet. No. 1 Wright, NE cor. NW, Section 2-11-3w, made 5,818 bbls. in sand 6,310-6,561 feet. Cromwell-Franklin Oil Co.'s No. 6 Trosper Park, NW cor. SW, Section 12-11-3w, has been completed for 11,921 bbls. in sand topped at 6,377 feet, total depth 6,452 feet. Wirt Franklin Petroleum Corp.'s No. 8 Lowery, SW cor. NE NE NW, Section

12-11-3w, made 8,884 bbls. in sand 6,340-6,410 feet. Coline Oil Co.'s No. 7 Olds, SW cor. NW NW, Section 24-11-3w, has been completed for 2,490 bbls. in Arbuckle lime, 6,630-34 feet. Indian Territory Illuminating Oil Co.'s No. 1 Farley, SW cor. NW SW, Section 24-11-3w, made 6,408 bbls. in sand, 6,320-6,629 feet. Coline Oil Co.'s No. 6 Clauer, SE cor. SW SE, Section 25-11-3w, made 5,596 bbls. in sand, 6,680-6,732 feet. Indian Territory Illuminating Oil Co.'s No. 5 Johnson, NE cor. NW NW, Section 25-11-3w, had sand 6,430-6,566 feet and made 2,406 bbls. Sinclair Oil & Gas Co.'s No. 3 School Land No. 67, NW cor. NE SE, Section 36-11-3w, made 15,940 bbls. in Wilcox sand 5,657-6,695 feet. No. 10 School Land No. 54, SE cor. NE, Section 36-11-3w, has been completed for 17,220 bbls. in sand 6,596-6,673 feet. No. 13 School Land No. 54, NW cor. SW NE, Section 36-11-3w, had sand 6,480-6,710 feet and made 7,150 bbls. Indian Territory Illuminating Oil Co.'s No. 2 Oklahoma State, SE cor. NE NW, Section 36-11-3w, has been completed for 10,481 bbls. in sand 6,486-6,684 feet. Indian Territory Illuminating Oil Co.'s No. 3 Fuzzell, SE cor. SW NW, Section 19-11-2w, has been completed for 6,301 bbls. in Arbuckle lime 5,991-6,401 feet. Sinclair Oil & Gas Co.'s No. 12 Vencl, SE cor. SW SE, Section 31-11-2w, has been completed for 31,290 bbls. in Wilcox sand 6,470-6,590 feet. The Prairie Oil & Gas Co. and T. B. Slick's No. 9 Hiddleston, SE cor. NW SE, Section 19-11-2w, has been completed for 5,619 bbls. in lime 6,070-6,440 feet.

Okfuskee County

Atlantic Oil Producing Co.'s No. 2 Brooks, CSL NE SW, Section 36-12-10, is rigging up to deepen. Fern Oil & Gas Co.'s No. 1 Turner, CEL SE SE, Section 24-11-10, is an old well drilling deeper at 2,280 feet. Papoose Oil Co.'s No. 6 McNac, CNL NW SE, Section 25-11-11, is rigging up to deepen. Champlin Oil & Refining Co.'s No. 11 Holmes, CSL NE NW, Section 22-11-11, has been completed as a dry hole at 3,568 feet. Gene Colvin and others' No. 1 Havel, NW cor. NE, Section 26-11-11, is dry and abandoned at 2,105 feet. Wells and others' No. 1 Micco, NE cor. SE NE, Section 14-10-11, made 35 bbls. from sand 2,167-71 feet.

Okmulgee County

Tiffany Oil Co.'s No. 3 Long, SE cor. NW SE, Section 25-16-11, is drilling at 1,600 feet. Berry & Piatt's No. 1 S. Roberts, NE cor. SW NW, Section 32-15-14, is rigging up. A. G. Hazlett has a machine on the ground for No. 1 E. Smith, SW cor. NE, Section 30-14-13. Elm Oil Co.'s No. 11 J. Rentie, SW cor., Section 13-14-14, is a machine. C. D. Burns' No. 17 I. Anderson, NE cor. NW NE, Section 35-14-14, is spudding. F. Sheedy's No. 16 H. Myers, NE cor. SE SW, Section 23-13-14, is shut down at 1,275 feet. Elm Oil Co.'s No. 11-A A. Rentie, NE cor. SW SE SE, Section 13-14-14, made 15 bbls. in sand 1,043-1,102 feet. E. J. Lambert's No. 3 Blake, C NW SE, Section 7-13-15, has been completed for 750,000 feet of gas in sand 1,928-35 feet.

Osage County

Peters Petroleum Corp. and Producers & Refiners Corp.'s No. 1, SE cor. NE, Section 22-27-11, is rigging up. Peters Petroleum Corp.'s No. 7, C NW, Section 27-27-11, is spudding. Indian Territory Illuminating Oil Co. has the cellar dug for No. 433, NW cor. SE NE, Section 6-26-12. The Texas Company and others' No. 6, NW cor. NE NW, Section 30-25-8, is rigging up. No. 7, NE cor. NW NW, Section 30-25-8, is also rigging up. The Texas Company's No. 2, SW cor. NW NE, Section 13-24-8, is an old well drilling deeper at 2,622 feet. Devonian Oil Co.'s No. 3, NE cor. SW SE, Section 30-21-10, is rigging up. Devonian Oil Co., Travis and others' No. 4, NE cor. SE SE, Section 25-21-11, is rigging up to deepen from 1,628 feet. Barnsdall Oil Co. moved a machine in for No. 20, NE cor. SW SE, Section 5-20-12. The Texas Company and others' No. 5, NW cor. NE NW, Section 30-25-8, has been completed for 263 bbls. in Bartlesville sand 2,264-69 feet. Peters Petroleum Corp.'s No. 6, NE cor. NW SW, Section 32-24-9, has been completed for 10 bbls. at 1,590 feet after plugging back from 2,250 feet. H. E. Hulen's No. 3, NE cor. NW SE SW, Section 3-24-11, made 5 bbls. in sand 1,648-1,740 feet. Oliphant and The Texas Company's No. 1, NW cor. SE SE, Section 13-23-7, is dry and abandoned at 3,007 feet. Wrightsman Petroleum Corp.'s No. 2, NW cor. NE SW, Section 32-22-8, had Bartlesville sand 2,267-2,302 feet, from which it made 17 bbls. W. D. Gray's No. 6, SW cor. NE NW, Section 19-22-11, is dry and abandoned at 2,117 feet. Devonian Oil Co.'s No. 5, NE cor. SE SW, Section 30-21-10, has been completed for 1,500,000 feet of gas in sand 1,987-1,992 feet. Barnsdall Oil Co.'s No. 19, SE cor. NE SE, Section 5-20-1w, is a dry hole at 1,372 feet.

Pawnee County

Geraldine Oil Co.'s No. 1 Elledge, SE cor. SW, Section 7-20-9, is rigging up. Thompson & Black's No. 2-A Mote, SE cor. NW NW NW, Section 14-20-9, is drilling at 190 feet. Indian Territory Illuminating Oil Co.'s No. 10 Little, SE cor. SW NW, Section 6-20-8, has been completed for 234 bbls. in sand 2,691-2,702 feet. Swift and others' No. 5 Smelzer, NW cor. SE SE NW, Section 35-20-9, made 10 bbls. in Red Fork sand 1,953-85 feet.

Pottawatomie County

Shell Petroleum Corp. has the rig on the ground for No. 2 Case, SE cor. SW SW, Section 14-6-3, West Asher Pool. Transcontinental Oil Co.'s No. 3 Miller, NW cor. NE NE, Section 22-6-3, is a cellar. The rig has been moved in for No. 4 Miller, SW cor. NE NE, Section 22-6-3. Stogner and others' No. 1 Earlsboro Townsite, Block 8, Lot 2, NW cor. SW NW, Section 8-9-5, has been completed for 440 bbls. at 4,357 feet in Wilcox sand topped at 4,345 feet. Burns and others' No. 1 Earlsboro Townsite, Block 12, Lot 3, NW cor. SE NW, Section 8-9-5, made 548 bbls. from Wilcox sand 4,356-69 feet. Twin State Oil Co.'s No. 1 Archer, NE cor. SE, Section 22-6-3, West Asher Pool, has been completed for 3,065 bbls. in sand 3,500-21 feet. Indian Territory Illuminating Oil Co.'s No. 2 Butler, NW cor. SW NW, Section 23-6-3, made 1,930 bbls. from sand 3,470-3,500 feet. The Prairie Oil & Gas Co.'s No. 1 Tomlin, SW cor. NW NW, Section 23-6-3, has been completed for 4,915 bbls. in sand 3,475-3,503 feet.

Seminole County

Amerada Petroleum Corp. and Dixie Oil Co. made location for No. 1 Chase, NW cor. NE SW, Section 29-9-6. Carter Oil Co. staked location for No. 4 Rogers, SE cor. NW SE, Section 2-8-5, Carr City Pool. The cellar has been dug for No. 6 Coker, SE cor. NE SW, Section 2-8-5. Amerada Petroleum Corp. moved the rig in for No. 1 Tiger, NW cor. NE SW, Section 3-8-5. Barnsdall Oil Co. has the rig on the ground for No. 2 A. Harjo, NE cor. NW, Section 20-6-6, Konawa Pool. Hilton Phillips and others' No. 6 Hyde, SW cor. NE, Section 20-6-6, is a rig on the ground. W. B. Pine has the cellar dug for No. 3 Cheparney, SW cor. NW NE, Section 20-6-6. No. 4 Cheparney, NW cor. NE, Section 20-6-6, is a cellar. The Prairie Oil & Gas Co. is moving in tools at No. 2 Caesar, SE cor. NE NW, Section 29-6-6. Shell Petroleum Corp.'s No. 1 Crump, SE cor. NE SW, Section 32-10-6, Searight area, has been completed for 122 bbls. at 4,089 feet after plugging back from Wilcox sand at 4,328 feet. Amerada Petroleum Corp. and others' No. 4 Edwards, NE cor. SE NE, Section 22-9-5, South Earlsboro Pool, flowed 1,580 bbls. from Wilcox sand 4,208-24 feet. No. 5 Edwards, SW cor. NE NE, Section 22-9-5, made 4,290 bbls. from Wilcox sand 4,214-38 feet. Eason Oil Co.'s No. 1 Anderson, NE cor. NW NE, Section 22-9-5, has been completed for 5,025 bbls. in Wilcox sand 4,250-60 feet. Amerada Petroleum Corp.'s No. 5 Grounds, SE cor. NW NW, Section 23-9-5, flowed 6,870 bbls. from Wilcox sand 4,195-4,210 feet. Continental Oil Co.'s No. 4 Maguire, SW cor. SE SE, Section 24-9-5, topped Wilcox sand at 4,211 feet, drilled to 4,219 feet and plugged back to 4,217 feet, where it made 280 bbls. Barnsdall Oil Co.'s No. 3 Factor, SW cor. NW SE, Section 13-7-6, Little River Pool, pumped 80 bbls. from Cromwell sand 3,219-52 feet. Independent Oil & Gas Co.'s No. 2 Wood, SE cor. NE NW, Section 13-7-6, has been completed for 200 bbls. in Cromwell sand 3,164-77 feet. Magnolia Petroleum Corp.'s No. 2 Scipio, SW cor. NW NW, Section 4-7-7, East Little River Pool, has been completed for 200 bbls. in Cromwell sand 3,308-34 feet. Sinclair Oil & Gas Co.'s No. 12 Phillips, NE cor. SE, Section 5-7-7, made 240 bbls. from Cromwell sand 3,205 feet. Magnolia Petroleum Co.'s No. 1 Hayes, SW cor. NW, Section 16-7-8, has been shut in for 22,500,000 feet of gas in sand 2,908-13 feet. Empire Oil & Refining Co.'s No. 1-C Fish, NW cor. SW NE, Section 19-7-8, is dry and abandoned at 4,241 feet in Wilcox sand. Barnsdall Oil Co.'s No. 4 Johnson, SE cor. SW SE, Section 17-6-6, Konawa Pool, flowed 4,995 bbls. from sand 2,904-19 feet. Hilton Phillips and others' No. 1 Chupco, SE cor. NW SE, Section 20-6-6, flowed 3,650 bbls. from sand 2,895-2,960 feet. Mid-Continent Petroleum Corp.'s No. 2 P. Harjo, NW cor. SW SE, Section 20-6-6, had sand 2,842-2,929 feet and flowed 2,795 bbls. No. 5 P. Harjo, NE cor. SE SW, Section 20-6-6, has been completed for 2,110 bbls. in sands 2,820-75 feet and 2,915-34 feet. No. 6 P. Harjo, SE cor. SW, Section 20-6-6, flowed 800 bbls. from sands 2,819-40 feet and 2,872-2,921 feet. The Prairie Oil & Gas Co. and T. B. Slick's No. 1 Amey, SW cor. NW, Section 21-6-6, has been abandoned at 3,265 feet. The Prairie Oil & Gas Co.'s No. 1 Caesar, NE cor. NW, Section 29-6-6, made 1,065 bbls. in sand 2,865-2,954 feet. No. 2 Wyetka, NW cor. SW SW, Section 24-5-7, has been completed for 45,900,000 feet of gas in sand 2,679-84 feet. Barnsdall Oil Co.'s No. 4 Lusty, NW cor. SW NE, Section 13-5-7, has been completed for 210 bbls. in sand 2,850-82 feet. Gypsy Oil Co.'s No. 5 Peters, NE cor. SW NE, Section 23-5-7, has been completed for 2,310 bbls. in Wilcox sand 4,128-44 feet.

Stephens County

Meridian Gas Co. has the rig up for No. 1 Burns, C SW NE, Section 35-2-9w. Kidney and others' No. 2 Dare, SW cor. NW NW, Section 1-2s-8w, has been abandoned at 2,250 feet. Owenwood Oil Co.'s No. 12 Massey, SW cor. SE NW, Section 12-2s-8w, has been completed for 20 bbls. in sand 2,072-95 feet.

Texas County

Argus Production Co. made location for No. 1 Boyce, C NW, Section 29-6-14ecm. Location has also been made for No. 1 Parker, C NW, Section 18-6-15ecm.

Tulsa County

Boyd and others' No. 1-A Horn, NW cor. NE SW, Section 23-18-14, is spudding. Vensel & Elliott's No. 7, NW cor. SW NW, Section 8-9-10, has been completed for 10 bbls. in sand 1,888-1,903 feet. Operators Oil Co.'s No. 4 Fisher, NW cor. NE SW, Section 8-19-11, has been abandoned at 1,931 feet.

Washita County

Southern Investment Co.'s No. 1 Music, NW cor., Section 10-9-20w, is dry and abandoned at 280 feet.

Washington County

Dewey Portland Cement Co.'s No. 1 Bailey, SW cor. NE NE, Section 16-28-13, is drilling at 100 feet.

Carter County

Magnolia Petroleum Co. made location for No. 1 Brady, SW cor. SE SW, Section 13-1s-3w. The rig is up for No. 7 E. Gill, NE cor. SE, Section 23-1s-3w. Wirt Franklin Petroleum Corp.'s rig is up for No. 1 Hooks, NW cor. NE, Section 24-1s-3w. Magnolia Petroleum Co.'s No. 2 E. R. Spigner, NW cor. NE NW, Section 24-1s-3w, has been completed for 509 bbls. in sand 2,363-77 feet.

Garfield County

Continental Oil Co. has moved the tools in for No. 1 Thorp, SE cor., Section 24-23-4w.

Grant County

Continental Oil Co. and others' No. 3 Webb, C SW NE, Section 2-27-3w, has been completed for 10,000,000 feet of gas in sand 4,175-78 feet.

Kay County

Waggoner Petroleum Co.'s No. 1 Hinkle, SW cor. NW NW, Section 3-26-3, has been abandoned at 3,798 feet. Harris & Haun's No. 3 Brown, C SE SW, Section 9-27-1w, made 15 bbls. in sand at 3,434 feet.

Kingfisher County

The Prairie Oil & Gas Co. made location for No. 1 Wright, C NW SW, Section 23-15-5w.

Marshall County

Bilbo Oil Corp.'s No. 13 Taliferro, NW cor. NE SE SE, Section 14-5s-5, is drilling at 450 feet. Max Westheimer moved the machine in for No. 7 Davis-Sullivan, SE cor. SW SE NW, Section 30-5s-6. H. B. Hearle's No. 1 A. Wilson, NE cor. NW, Section 10-5s-5, has been abandoned at 760 feet. Bilbo Oil Corp.'s No. 11 Taliferro, NE cor. SE SE, Section 14-5s-5, Madill Pool, made 45 bbls. in sand 529-42 feet. Oklahoma Bay Transit Co.'s No. 1 Arbuckle, NE cor. SW SW SE, Section 25-5s-5, is dry and abandoned at 570 feet. Max Westheimer's No. 6 Davis-Sullivan, NW cor. SW SE NW, Section 30-5s-6, made 37 bbls. in sands 582-93 feet and 611-21 feet.

Muskogee County

Western Development & Electric Co. has a machine on the location for No. 1 E. Spaulding, SW cor. SE, Section 4-15-18. J. M. Foltz moved a machine in for No. 4 Spaulding, NE cor. NW NE SW, Section 9-15-18. J. R. Parks' No. 1 Rentie, NE cor. SE NE SW, Section 15-15-18, is spudding. F. L. Beam and others' No. 1 Thomas, NW cor. NE SW SE, Section 17-15-18, is spudding. M. S. Mussellem's No. 1 M. Sango, SE cor. NW, Section 17-15-18, is rigging up. The machine is in for No. 1 Mary Sango, SW cor. NE, Section 17-15-18. Becker & Hutchinson's No. 1 Mayes, C SE NE, Section 16-12-19, is a rig. G. H. Hanson's No. 1-A G. Jobe, NW cor. SW NE, Section 12-15-18, is dry and abandoned at 1,090 feet. H. E. Williams' No. 1 A. Robins, NW cor. SW NW, Section 13-15-18, is dry and abandoned at 1,235 feet. M. S. Mussellem's No. 1 S. Stehnam, NE cor. NW, Section 18-15-18, has been abandoned at 1,821 feet.

Pittsburg County

Nolan & Nolan's No. 1 Jones, NE cor., Section 14-7-18, is rigging up. Central States Light & Power Co.'s No. 1 Riddle, NW cor. NE NW, Section 15-7-18, is a rig on the ground. Empire Oil & Refining Co.'s No. 1 A. Williams, C NE SW, Section 33-7-16, has been abandoned at 3,975 feet. Central States Light & Power Co.'s No. 1 Bascom, NW cor. SE SE, Section 10-7-18, has been completed for 24,800,000 feet of gas in sand 1,796-1,848 feet. Midwestern Oil & Gas Co.'s No. 1 Bascom, SE cor., Section 10-7-18, has been completed for 27,000,000 feet of gas in sand 1,803-70 feet.

Pontotoc County

Dalaney & King's No. 1 Gilmore, NW cor. SE, Section 30-5-8, is drilling at 960 feet. The Prairie Oil & Gas Co. is moving the tools in for No. 1 Flemming, NW cor. SE SE, Section 1-5-4. Benedum & Trees Oil Co.'s No. 1 Norris, NE cor. NW SW, Section 30-5-5, has been completed for 112 bbls. in Viola lime 2,395-2,565 feet.

WEST TEXAS FIELDS

(Continued from Page 68)

No. 1 Teaff, east of the Dunnigan and Shell Petroleum Corp.'s discovery well in the Guadalupe County School Lands Survey, Taylor County, missed the pay sand found in the discovery to the west, and has been abandoned at a total depth of 2,446 feet.

COMPLETIONS IN WEST TEXAS

Week Ending July 5

Crane County

Continental Oil Co.'s No. 1 W. F. Durham, completed July 27, 1926, total depth 2,667 feet, top of pay 2,475 feet, initial production 35 bbls., now plugged and abandoned. Same company's No. 2 W. F. Durham, completed January 1, 1927, total depth 2,513 feet, top of pay 2,300 feet, initial production 55 bbls. per day, now plugged and abandoned. Same company's No. 3 W. F. Durham, completed February 4, 1926, total depth 2,406 feet, top of pay 2,352 feet, initial production 28 bbls. per day, now plugged and abandoned. Same company's No. 4 Hughes, completed January 22, 1927, top of pay 2,349 feet, initial production 104 bbls. per day, total depth 2,369 feet. C. C. Duffey El Cowden Brothers & Co., dry and abandoned, total depth 2,862 feet. The Texas Company's No. 6 R. King.

completed October 10, 1926, top of pay 2,301 feet, initial production 120 bbls. per day, total depth 2,352 feet, now plugged and abandoned. The Texas Company's No. 10 R. King, completed February 25, 1926, top of pay 2,306 feet, initial production 114 bbls. per day, total depth 2,376 feet, now plugged and abandoned.

Irion County

Straugh & Texannati Oil Co.'s No. 1, initial production 105 bbls., top of pay 1,439-49 feet, total depth 1,449 feet.

Pecos County

Dixie Oil Co.'s No. 3 J. H. Tippett, total depth 420 feet, plugged back to 412 feet, top of pay 348 feet, initial production 40 bbls. per day. Transcontinental Oil Co. and Arkansas Fuel Co.'s No. 2 F. A. Perry, top of pay 1,922 feet, shot 15 quarts from 1,925-38 feet, initial production 60 bbls. per day, total depth 1,938 feet.

Ector County

Cosden Oil Co.'s No. 3 Kloh & Rumsey, show oil and gas 3,617 feet, top of pay 3,625 feet, increase at 3,637 feet, estimated 300-bbl. well flowing before shot, shot 120 quarts 3,616-3,670 feet, initial production after shot 500 bbls.

Glasscock County

Lion Oil & Refining Co.'s No. 1 R. C. Coffee, top of pay 2,245 feet, initial production 800 bbls., total depth 2,290 feet.

Upton County

Continental Oil Co.'s No. 2 A. S. Burleson was completed May 13, 1926, top of pay 2,150 feet, initial production 34 bbls. per day; total depth 2,230 feet; plugged and abandoned. Same company's No. 2 Sanger Brothers, completed May 12, 1926, top of pay 2,180 feet; initial production 10 bbls. per day; total depth 2,241 feet; now plugged and abandoned. Same company's No. 5 Sanger Brothers, completed July 10, 1926, initial production 25 bbls.; top of pay 2,164 feet; total depth 2,215 feet; now plugged and abandoned. Same company's No. 19 Sanger Brothers, completed December 25, 1926 at total depth 2,390 feet; top of pay 2,389 feet; initial production 50 bbls.; now plugged and abandoned. Same company's No. 2 Shirley, completed January 8, 1927, total depth 2,151 feet; top of pay 2,124 feet; initial production 75 bbls. per day; now plugged and abandoned. Dixie Oil Co.'s No. 1 E. S. Hughes, completed June 5, 1926, top of pay 2,067 feet; initial production 44 bbls. per day; total depth 2,093 feet; now plugged and abandoned. Same company's No. 3 E. S. Hughes, completed September 1, 1926, top of pay 2,042 feet; initial production 250 bbls.; total depth 2,088 feet; now plugged and abandoned. Same company's No. 4 E. S. Hughes, completed September 4, 1926, top of pay 2,180 feet; initial production 4,800 bbls.; total depth 2,180 feet; now plugged and abandoned. Same company's No. 6 E. S. Hughes, completed October 9, 1926, total depth 2,181 feet; top of pay 2,040 feet; initial production 288 bbls.; now plugged. Same company's No. 9 E. S. Hughes, completed January 22, 1927, top of pay 2,160 feet; initial production 206 bbls. per day; total depth 2,186 feet; now plugged and abandoned. Independent Oil & Gas Co.'s No. 1 Emma Wooley, completed January 23, 1927; top of pay 2,048 feet; initial production 10 bbls. oil and 50 per cent water; total depth 2,173 feet; now plugged and abandoned. Same company's No. 3 Emma Wooley, completed October 18, 1926, top of pay 2,047 feet; initial production 397 bbls.; total depth 2,160 feet; now plugged and abandoned. Same company's No. 5 Emma Wooley, completed December 4, 1926, top of pay 2,160 feet; initial production 30 bbls. per hour; total depth 2,160 feet; now plugged and abandoned. Shell Petroleum Corp.'s No. 3 E. S. Hughes, completed November 22, 1926, top of pay 2,159 feet; initial production 7,000 bbls.; total depth 2,160 feet; now plugged and abandoned. Same corporation's No. 5 E. S. Hughes, completed January 28, 1927 at total depth 2,183 feet; top of pay 2,055 feet; initial production 100 bbls. per day; now plugged and abandoned.

Winkler County

Prairie Oil & Gas Co.'s No. 2 T. C. Hendrick, first completed June 9, 1928 with a total depth of 2,733 feet, and initial production 2,685 bbls.; top of big pay 2,735 feet; after drilling deeper top of second sand was 2,873 feet; initial production after drilling deeper 525 bbls., flowing; total depth 2,895 feet.

PANHANDLE FIELDS

(Continued from Page 70)

1,007 feet. Union Oil Co. of Nevada's No. 3 Alexander, dry and abandoned; total depth 1,038 feet.

Coleman County

Harris, Haun & Fleeger's No. 1 Woodward, dry and abandoned; total depth 1,870 feet. Lloyd Oil Corp.'s No. 12 Bartholomew, top of pay 1,454 feet; initial production 70 bbls. oil and 1 bbl. of water; total depth 1,457 feet. Windsor and others' No. 1 McClotchey, gas sand 740 feet, initial production 1,600,000 feet of gas; total depth 761 feet.

Palo Pinto County

Gordon and others' No. 1 Newman dry and abandoned; total depth 1,196 feet; McLester Oil Co.'s No. 2 Wilbar, dry and abandoned; total depth 1,730 feet. Prairie Oil & Gas and Amerada's No. 2 Allen & Richie, total depth 1,674 feet; plugged back to 1,673 feet; top of pay 1,670 feet; initial production 50 bbls.

Parker County

Burgone and others' No. 1 Graybill, total depth 910 feet; plugged back to 680 feet; shot with 20 quarts 680-90 feet; dry and abandoned.

Shackelford County

Carter Development Co.'s No. 1-134 Nail, dry and abandoned; total depth 1,687 feet. Gilman & McMurray's No. 2 Jeter, top of pay 894 feet; initial production 121 bbls.; shot with 10 quarts 894-906 feet; total depth 916 feet; Humble Oil & Refining Co.'s No. 1 Lazarus, dry and abandoned; total depth 1,910 feet. Roeser & Pendleton, Inc.'s No. 3-202 Dawson and others, top of pay 1,592 feet; initial production 35 bbls.; total depth 1,608 feet. Roeser & Pendleton's No. 4-202 Dawson and others, top of pay 1,602 feet; initial production 200 bbls.; total depth 1,619 feet. Skelly Oil Co. and others' No. 3 Matthews, total depth 1,129 feet; plugged back to 1,012 feet; shot with 5 quarts 993-98 feet, and with 10 quarts at 988-95 feet; initial production 7½ bbls. oil and 1½ bbls. of water.

Stephens County

Close Oil Co.'s No. 2 Elliott, total depth 4,302 feet; shot with 120 quarts from 3,982-4,019 feet; dry and abandoned. Clover Leaf Mining Co.'s No. 2 Glasscock, total depth 1,822 feet; plugged back to 1,737 feet; top of pay 1,715 feet; initial production 400,000 feet of gas. W. J. Rhodes' No. 2 West, total depth 2,146 feet; plugged back to 2,144 feet; top of pay 2,132 feet; initial production 16 bbls. Texas Fidelity Oil Co.'s No. 1 Lassiter, dry and abandoned; total depth 2,000 feet.

COMPLETIONS IN PANHANDLE DISTRICT

Week Ending July 5

Carson County

Cockrell-McIlroy Oil Co.'s No. 1 Simms, total depth 3,460 feet; plugged back to 3,160 feet; initial production 42,000,000 feet of gas from 2,770-3,160 feet. Prairie Oil & Gas Co.'s No. 3 Noel, top of pay 3,218 feet; initial production 370 bbls.; total depth 3,229 feet.

Gray County

The Texas Company's No. 8-A Chapman, top of pay 2,751 feet; initial production 385 bbls.; total depth 2,759 feet. Same company's No. 7-A McLarty-Lester, total depth 2,650 feet; show of oil 2,530-40 feet; 1,500 feet oil in hole 2,565-70 feet; shot with 120 quarts from 2,530-2,650 feet; initial production 185 bbls. Same company's No. 15 Bowers, top of pay 2,930 feet; show oil 2,850 feet; top of pay 3,009-25 feet; initial production 825 bbls.; total depth 3,025 feet. Wilcox-Pampa Oil Co.'s No. 16 Combs & Worley, top of pay 2,752-70 feet and 2,819-29 feet; initial production 507 bbls.; total depth 2,850 feet.

Wheeler County

Dunway Brothers' No. 1 Worley, total depth 2,319 feet; plugged back to 2,315 feet; top of pay 2,226-34 feet and 2,265-75 feet; initial production 60 bbls. Murchison & Fain's No. 16 Close, top of pay 1,340-1,495 feet; initial production 25,000,000 feet of gas; total depth 1,495 feet. Murchison & Fain's No. 17 Close, dry and abandoned; total depth 1,312 feet.

SULPHUR PER CENT IN GASOLINE SMALL

(Continued from Page 31)

Sample No.	Color Saybolt	Doctor test	Corrosion test	Sulphur %
5	+19	Negative	No	0.03
6	+21	Negative	No	0.02
7	Colored	Negative	No	0.06
8	Colored	Negative	No	0.01
9	Colored	Negative	No	0.06
10	Colored	Negative	No	0.07
11	Colored	Positive	No	0.03
12	12	Negative	No	0.04
	NEW YORK			
13	15	Negative	No	0.15
14	+21	Negative	No	0.06
15	+21	Positive	No	0.03
16	20	Negative	No	0.04
17	Colored	Negative	No	0.04
18	+22	Negative	No	0.06
19	23	Negative	No	0.06
20	Colored	Negative	No	0.06
21	Colored	Negative	No	0.01
22	Colored	Negative	No	0.01
23	10	Negative	No	0.07
24	14	Positive	No	0.05
	WASHINGTON			
25	Colored	Negative	No	0.04
26	Colored	Positive	No	0.08
27	+18	Positive	No	(†)
28	+22	Negative	No	0.06
29	Colored	Negative	No	0.02
30	18	Negative	No	0.01
31	22	Negative	No	0.04
32	+21	Negative	No	0.07
33	Colored	Negative	No	0.10
34	24	Negative	No	0.06
35	Colored	Negative	No	0.06
36	+19	Negative	No	0.07
37	Colored	Negative	No	0.09
38	21	Negative	No	0.09
39	Colored	Negative	No	0.07
40	Colored	Negative	No	0.06
41	+25	Negative	No	0.09
42	Colored	Positive	No	0.05
	PITTSBURGH			
43	Colored	Negative	No	0.06
44	Colored	Negative	No	0.08
45	Colored	Positive	No	0.06
46	Colored	Negative	No	0.14
47	11	Negative	No	0.04
48	Colored	Negative	No	0.02
49	Colored	Negative	No	0.08
50	Colored	Negative	No	0.09
51	Colored	Negative	No	0.09
52	22	Negative	No	0.12
53	+19	Negative	No	0.04
54	Colored	Positive	No	0.04
55	+19	Positive	No	0.18
56	23	Negative	No	0.07
57	+22	Negative	No	0.08
58	Colored	Positive	No	0.04
59	Colored	Negative	No	0.04
60	Colored	Negative	No	0.02
	CHICAGO			
61	+25	Negative	No	0.04
62	+25	Negative	No	0.02
63	+25	Negative	No	0.03
64	25	Negative	No	0.04
65	Colored	Negative	No	0.02
66	+20	Negative	No	0.02
67	19	Negative	No	0.05
68	+25	Positive	No	0.10
69	22	Positive	No	0.12
70	+17	Negative	No	0.03
71	Colored	Positive	Yes	(†)
72	17	Negative	No	0.07
73	Colored	Positive	No	(†)
74	+25	Negative	No	0.04
75	Colored	Negative	No	(†)
76	+25	Negative	No	0.02
	NEW ORLEANS			
77	+18	Negative	No	0.04
78	Colored	Negative	No	0.02
79	Colored	Negative	No	0.08
80	Colored	Negative	No	0.06
81	+19	Negative	No	0.14
82	19	Positive	No	0.27
83	25	Negative	No	0.14
84	+15	Positive	No	0.02
85	Colored	Negative	No	0.01
86	18	Negative	No	0.13
	ST. LOUIS			
87	+25	Negative	No	0.03
88	+22	Positive	No	0.08
89	+19	Positive	No	0.07
90	25	Negative	No	0.09
91	+23	Negative	No	0.09
92	Colored	Negative	No	0.02
93	Colored	Positive	No	(†)
94	25	Negative	No	0.03
95	+22	Negative	No	0.03
96	+25	Negative	No	0.16
97	+25	Negative	No	0.05
98	Colored	Negative	No	0.02
99	+21	Negative	No	0.04
100	+25	Negative	No	0.03
101	+20	Negative	No	0.05
102	+21	Negative	No	0.02
103	+25	Positive	No	0.01
104	+25	Negative	No	0.04
	BARTLESVILLE			
105	+25	Negative	No	0.07
106	+24	Negative	No	0.01
107	+25	Positive	No	0.01
108	25	Negative	No	0.03
109	+25	Positive	No	0.03
110	+25	Positive	No	0.03
111	+25	Negative	No	0.07
112	+24	Negative	No	0.04
113	+25	Negative	No	0.02
114	+25	Negative	No	0.04
115	Colored	Negative	No	0.02
116	+25	Negative	No	0.04
	OMAHA			
117	+22	Negative	No	0.03
118	Colored	Positive	No	0.04
119	25	Negative	No	0.01
120	Colored	Negative	No	0.00
121	+25	Negative	No	0.04
122	+25	Negative	No	0.01
123	25	Negative	No	0.01
124	19	Negative	No	0.03
125	25	Positive	No	0.04
126	+25	Negative	No	0.02
127	Colored	Negative	No	0.03
128	+25	Positive	No	0.01
129	+25	Negative	No	0.07
130	Colored	Negative	No	0.02
131	25	Negative	No	0.07
132	Colored	Negative	No	0.01
133	Colored	Positive	No	0.02
134	+25	Negative	No	0.01
	DENVER			
135	+25	Negative	No	0.01
136	21	Negative	No	0.01
137	24	Negative	No	0.03
138	+25	Negative	No	0.03
139	+25	Negative	No	0.01
140	25	Positive	No	0.02
	LARAMIE			
141	+21	Negative	No	0.05
142	15	Negative	No	0.04
143	15	Negative	No	0.01
144	+15	Negative	No	0.04
145	Colored	Negative	No	0.04
146	+22	Negative	No	0.03
	SAN FRANCISCO			
147	Colored	Negative	No	0.05
148	Colored	Negative	No	0.05
149	24	Negative	No	0.18
150	+25	Negative	No	0.03
151	+25	Negative	No	0.11
152	+21	Negative	No	0.04
153	Colored	Negative	No	0.01
154	Colored	Negative	No	0.03
155	Colored	Negative	No	0.03
156	Colored	Negative	No	0.01
157	+25	Negative	No	0.05
158	+24	Negative	No	0.11

*"Colored" denotes that the gasoline as marketed is artificially colored. †Insufficient sample to determine sulphur.

NEW PLAN TO EXTINGUISH FIRE IN RUMANIAN WELL

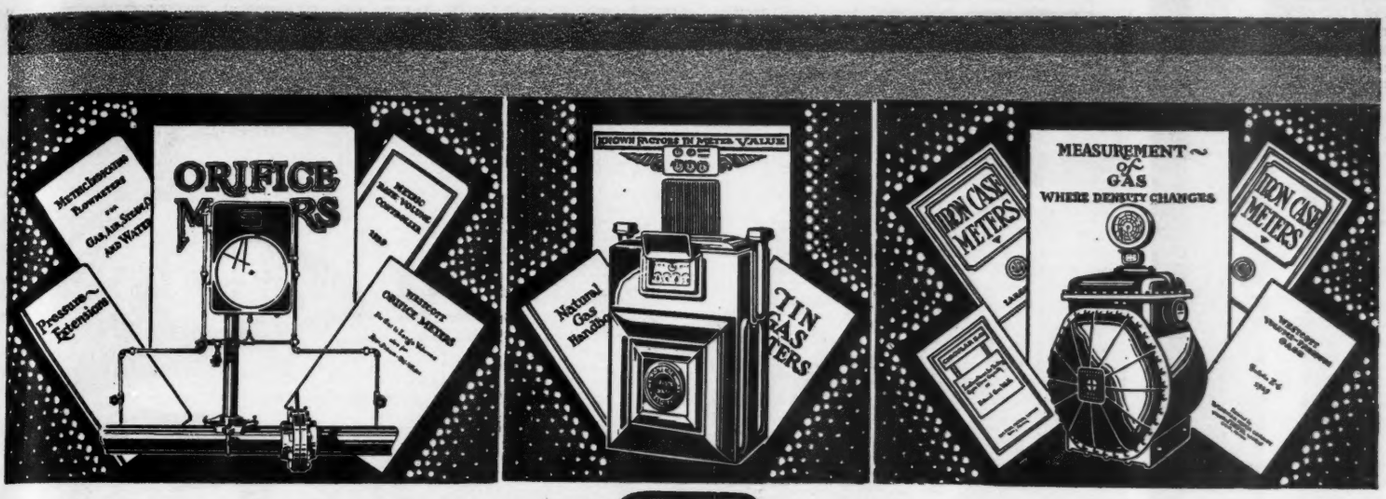
Latest news from Moreni, Rumania, regarding the fire at well No. 160 reports that following the filling of tunnel No. 3 with gas and the explosion and fire which took place in its mouth, which we reported in the last number, it was believed that the pipe which goes the length of the tunnel and makes connection with the clamps on the casing was still in good condition. On the strength of this belief, the pumping of barium was continued for another two days, but it didn't reach the casing as intended, merely flooding the tunnel, showing that the pipe must be damaged somewhere. After reviewing the situation, it was decided to abandon all further efforts to put out the fire by means of the tunnels, etc.

After conference, which took place in Moreni, and at which engineers of the different companies were presided over by Mr. Engineer Pavelescu from the Ministry of Industry and Commerce, the whole question of putting out the fire and the possibility of it becoming spread out even more than at present, owing to the breaking out of gas in new places, was considered.

Mr. Engineer N. Catuneanu, who has a long experience in the Rumanian oil industry, proposed that a number of wells be drilled and deepened to the sand from which the burning well No. 160 is flowing and that the burning well be then drowned out by pumping in mud fluid through the new wells. The proposal was accepted and the Shell company offered two neighboring wells, namely Nos. 304 and 307, to be deepened with the above purpose in view. The Standard Oil Co. has also submitted proposals for deepening two of its wells for the same purpose.

TO DRILL AT VINTON

HOUSTON, Tex., July 7.—Gorbat Oil Co., with headquarters at Beaumont and Vinton, has been organized to develop a block of acreage recently acquired on the north side of Vinton. Incorporators are G. D. Baten, Thomas J. Baten and W. D. Gordon of Beaumont and E. H. Lyons and J. B. Brechin of Vinton.



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Here is a partial list of current American Meter Company publications. Check your files to see wherein they are not up-to-date, then ask us for the publications you want or describe your job, if you wish specific recommendations or data.

AG-4 Recording and Indicating Demand Meters
E-6 Westcott Volume and Pressure Recording Gauge
E-20 Instruction on testing High Pressure Meters
EG-2 Westcott Orifice Meters
E-2 Measurement by Orifice
E-3 Metric Indicating Flow Meters
E-5 Metric Rate-Volume Controller

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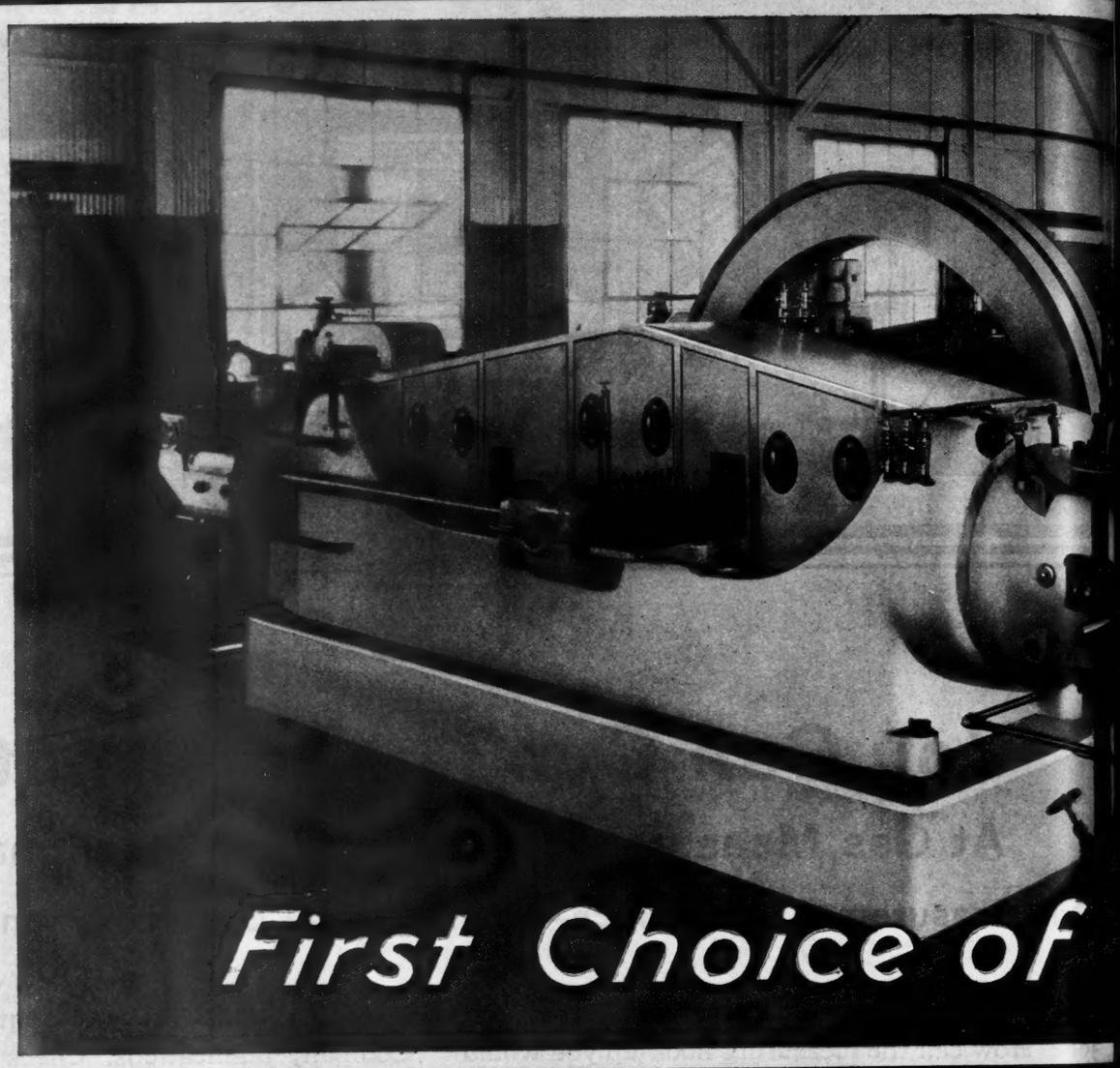

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COOPER-BESSE

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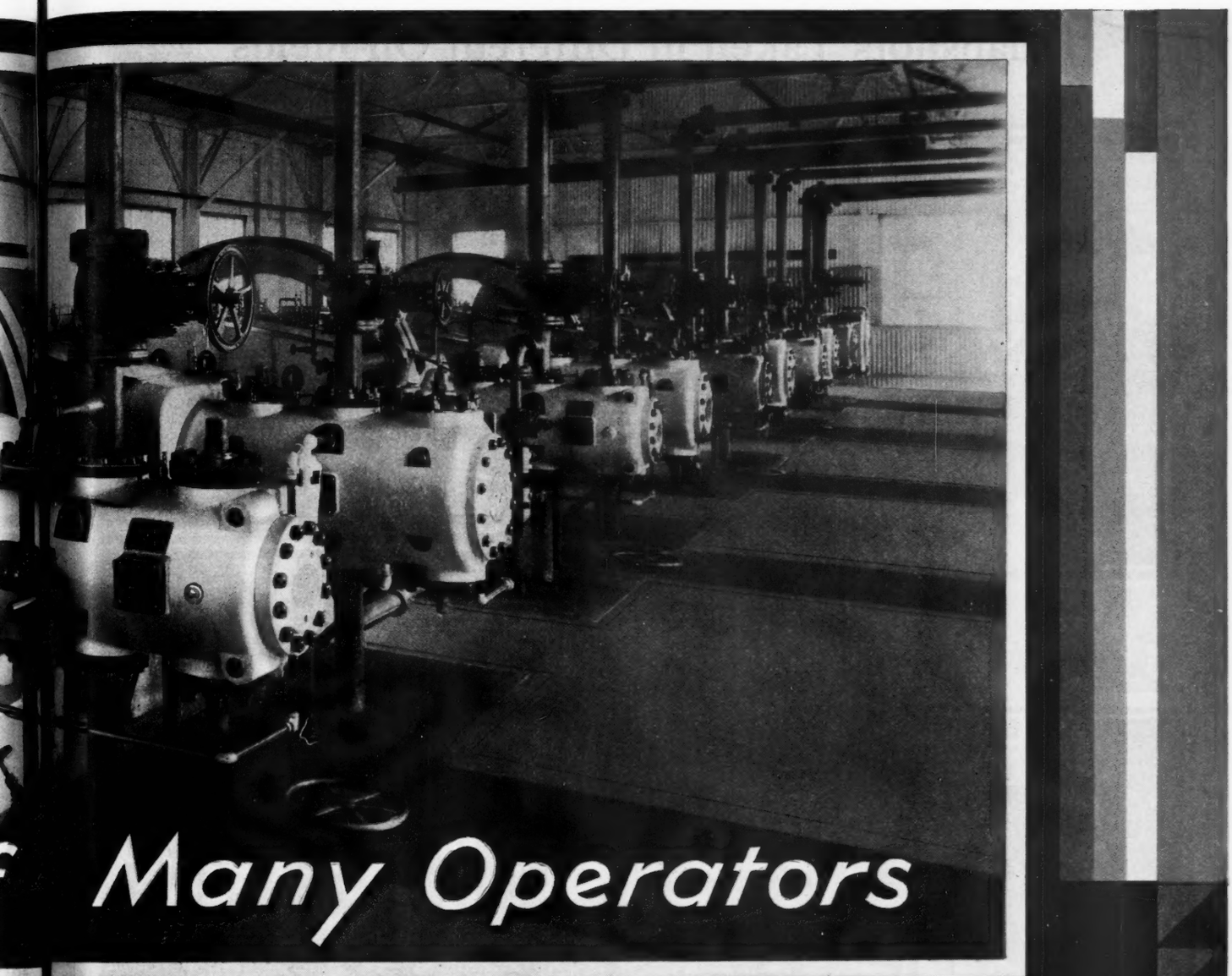
"If they left it to me, I'd put the BLUE RIBBON on Type-80's every time!" That's the way many engine operators feel about these 170 B. H. P. compressor units. Type-80's are engineered with "big engine" thoroughness—reducing shut-down losses to a minimum.

Any Type-80 operator can point out to you many features which make these 4-cycle engines simple to inspect, adjust and repair, with little or no sacrifice of

THE COOPER-BESSEMER CORPORATION



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SEMER TYPE 80

running time. All reciprocating parts are completely accessible. Indicator cards can be easily taken on both power and compressor cylinders — adjustments made (if needed) — and the engine put back on the load in record time.

If you would like to know about the many improved features of the new Type-80, ask us to send the illustrated Bulletin.

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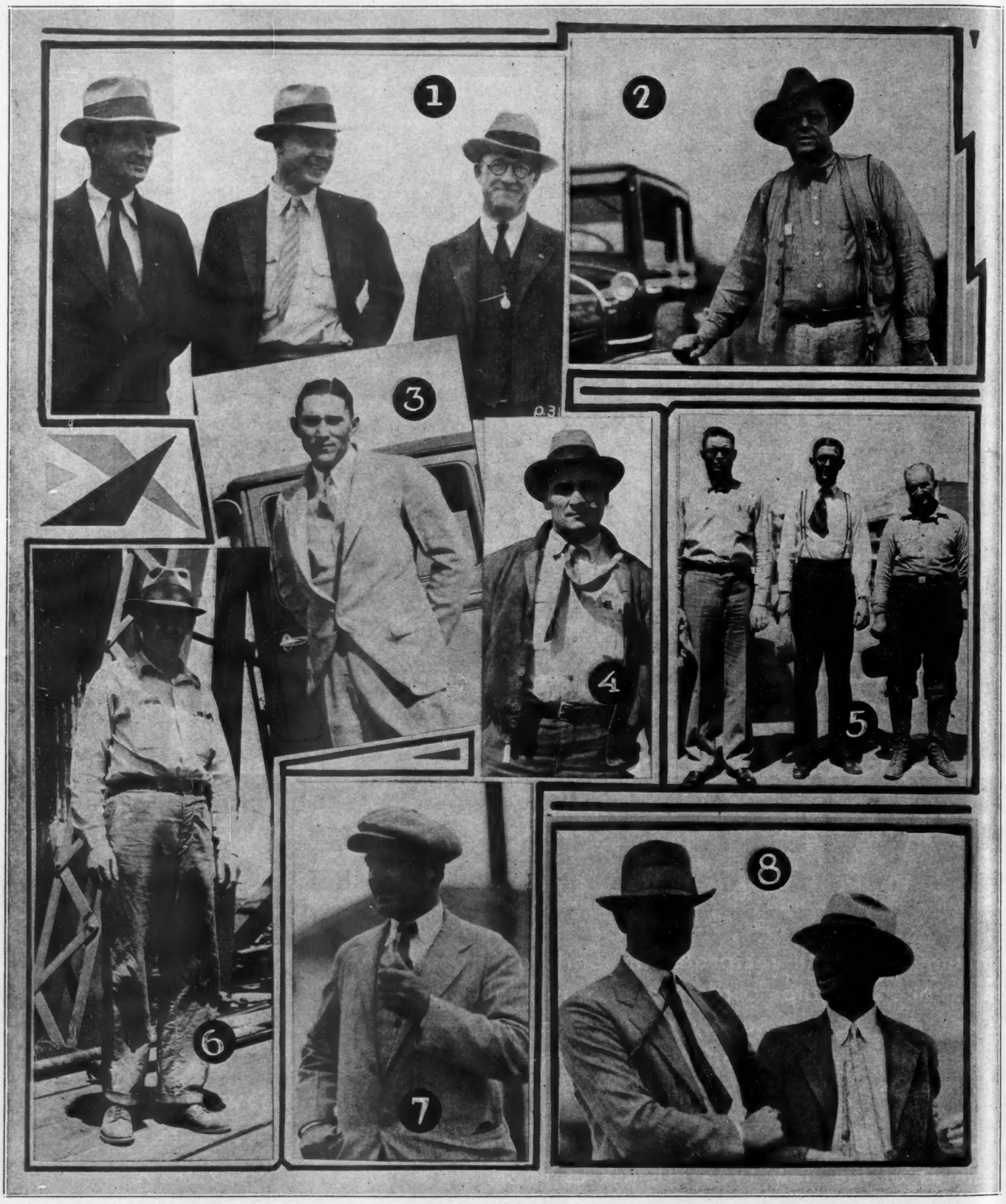
Mount Vernon, Ohio, Grove City, Pennsylvania

Snapshots Taken in Different Oil Fields



(1) I. B. Cate, Halliburton Oil Well Cementing Co.; Ed Ligon and J. Burr Gibbons, Oil Well Improvement Co. (2) Clarence H. Johnson, superintendent of operation, Vern and Farley gasoline plant, Indian Territory Illuminating Oil Co., Oklahoma City, Okla. (3) Charles Halsell, West Texas representative, Murray Tool & Supply Co. (4) Sam Osborne, tool pusher, Crosbie-Robinson Co., Oklahoma City, Okla. (5) C. A. Baker, F. E. Parks and George Newton, Oil Well Supply Co., Tonkawa, Okla. (6) R. S. James, in charge of drilling tools in the Oklahoma City district, Indian Territory Illuminating Oil Co. (7) W. H. Meier, engineer, Atlantic Oil Producing Co., Dallas, Tex. (8) R. W. Richmond, umpire, Yates Pool, and H. P. Cartney, superintendent, California Co., Yates Pool. Picture No. 4 courtesy advertising department, Lucey Production Corp.

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cars of SmithWelded Line Pipe.
112 miles of pipe, or 15 trainloads.
lines now under construction.
It was in anticipation of just
transportation as the present
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We still have open capacity.

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GAS LINE PIPE

Natural Gas Developments

OMAHA ASKS NEW BIDS FROM GAS COMPANIES

OMAHA, Neb., July 5.—Despite the fact that Omaha has twice received bids from natural gas companies for a city supply of gas, and has rejected the bids submitted, a new set of bids has been called for to be opened July 10. Entirely new provisions are provided under these new specifications, and it is believed the natural gas companies can make bids which will be satisfactory to the city. Omaha owns its gas plant and distributing system and the natural gas companies are not being called on to put any money into the plant within the city limits.

The revised specifications cut off about $4,000,000 in the cost of the contract, provide for a 20-inch pipe line instead of a 22-inch as under previous plans, specify that the metropolitan board shall finance the distribution system, including the cost of a feed line to the city limits, reduce the size of the bidding bond, and make the construction bond apply only to performance of construction instead of fulfillment of the 20-year pipe line contract.

In former specifications the city demanded that a double 22-inch pipe line be laid for 75 miles from Omaha. Under the new specifications but one line is required, but the bidder is to state the charge, per year, of this second line, should the city call for its construction at any time.

The city retains the right to cancel the contract and buy gas elsewhere for any increase in the price of gas, including that of receiver's order, except where such increase would be by order of federal court on complaint of some other community and involving a decree of a regulating body.

The date of the city election on the bids is set for October 1, but may be changed by agreement.

A provision specifies that should the supplying pipe line company fail to bring in gas by September 1, 1931, it would not be accepted until May 1 of the following year and the bidder would forfeit $800,000 out of his $1,000,000 bidding bond, or $100,000 per month for the delay as liquidated damages.

It is specified that the heat units in gas supplied shall be 950 on a sea-level basis which will provide for less at this altitude.

It is anticipated that bids will be received from the Western Natural Gas Corp., the Missouri Valley Pipe Line Co. and possibly from the Cities Service Co.

Several cities in this section, including Council Bluffs, Iowa, have recently refused contracts for natural gas on the ground that prices asked for the gas are too high. The city of Omaha manufactures gas at 33 cents per 1,000 feet.

BUILDING HELIUM TANK CARS

CHICAGO, July 5.—The General American Tank Car Co. is building what it claims is the largest and most expensive car ever constructed for the purpose. The tank car is to transport helium gas from the Amarillo Field in Texas to the Navy hangars at Lakehurst, N. J. It will carry 2,000 pounds of helium gas at a pressure of 2,000 pounds to the square inch.

A PENNSYLVANIA GASSER

WAYNESBURG, Pa., July 5.—A gas well, with an initial production of 3,500,000 feet, has been brought in on the John Morris farm in Washington Township, Greene County, by the Peoples Natural Gas Co., of Pittsburgh.

TENNESSEE GAS WELL AT 84 FEET FLOWING OVER 2,000,000 FEET

By Whit

CHATTANOOGA, Tenn., July 5.—Considerable natural gas is being found in many parts of Tennessee at this time and there is and has been a rush for leases, especially in the central portion of the State, and miles and miles of leases have been taken from the division line between Kentucky and Tennessee and as far as the southern line in Tennessee.

A well known operator and scout who has been in Tennessee for a number of years and who is well posted in development work writes:

"Nestled down among the hills of Lincoln County, Tennessee, is probably the baby gas well of the continent coming in at 84 feet and doing probably better than 2,000,000 feet after flowing open through 6¼-inch casing for eight hours. The well was completed and capped the forepart of June and when gauged recently showed no dimunition after flowing open a couple of hours. It is known as No. 1 Dickey and owned by the United Light & Power Co., and is the third commercial gas well drilled by this company on a large structure near Smithland, mapped by J. W. Young, of Fayetteville. The other two wells found their best gas sand at 245 feet and 159 feet in a soft rotten or spongy formation that should prove an ideal storage for either oil or gas. It is overlaid with a thick, hard lime that effectually seals the gas. Geologists have found by the study of a number of old wells in Lincoln County that at least four producing gas sands lie under the Hickey sand within 600 or 700 feet.

"The United Light & Power Co. owns the Chattanooga Gas Co., and it is said has started drilling the Smithland Dome in hopes of developing a sufficient gas supply for Chattanooga and surrounding towns. It now has two rigs drilling on No. 1 Thompson and No. 1 Holman, both on the Smithland structure but some distance from the other wells. The company has about 30,000 acres under lease in Lincoln County, the leased area covers three other structures mapped last year by the Tennessee Geological Department.

"The deepest test, 8 miles south of McMinnville, has resumed operations at 1,700 feet. No information was available from the deep test near Sparta by the same operators. Newell and associates' No. 2 Oakley is shut down for repairs at 65 feet in Dickson County. The Central Petroleum Co. has a location near Spivey in western Clay County near a gas well drilled by J. H. McClurkin in 1927; there was no market for gas at that time and the casing was pulled out and the hole plugged."

NATURAL GAS PROBLEMS TO FEATURE A.G.A. MEET

Development of natural gas having reached such enormous proportions in a comparatively short time, discussion of that subject promises to be one of the notable features of the Twelfth Annual Convention and Exhibition of the American Gas Association at Atlantic City, N. J., October 13-17.

At both the general sessions and sectional meetings, all of the many problems which present themselves to the industry will be discussed by men who are believed to be the best qualified for this purpose through their training and experience.

While details of the convention program are not available, the members of the general program committee are busily engaged in putting it into shape. The members of the committee are: P. S. Young, Public Service Electric & Gas Co., Newark, N. J., chairman; Joe Carmichael, Iowa Committee on Public Utility Information, Des Moines, Iowa; Miss Julianne Doane, The Peoples Gas Light & Coke Co., Chicago, Ill.; E. M. Farnsworth, Jr., Old Colony Gas Co., Braintree, Mass.; F. C. Freeman, Providence Gas Co., Providence, R. I.; D. W. Harris, Arkansas Natural Gas Corp., Shreveport, La.; R. C. Hoffman, Jr., Southern Cities Public Service Co., Atlantic, Ga.; Jacob J. Jones, Bridgeton Gas Light Co., Bridgeton, N. J.; S. W. Meals, Carnegie Natural Gas Co., Pittsburgh, Pa.; E. P. Prezzano, Westchester Lighting Co., Mount Vernon, N. Y.; A. H. Sikes, Great Northern Gas Co., Sault Ste. Marie, Ontario, Canada; H. Leigh Whitelaw, American Gas Products Corp., New York, N. Y.; H. W. Hartman, association headquarters, and K. R. Boyes, association headquarters.

GAS FOR BOWLING GREEN

The Times-Journal of Bowling Green, Ky., says: Following the final passage of the natural gas franchise, the Kentucky-Tennessee Light & Heat Co. is pushing the work for the hookup with the gas line which will bring natural gas to Bowling Green. A belt pipe line is being installed around the city to take care of the supply for all parts of the city and Manager Fitch expects to be able to furnish residents of Bowling Green with natural gas in the early fall, possibly by the first of September.

EXCISE TAX ON GAS

COLUMBUS, Ohio, July 5. — The East Ohio Gas Co. must pay the State of Ohio $959,000 in excise taxes levied on gas produced in West Virginia and Pennsylvania and consumed in Ohio, according to a ruling by the United States district court.

The decision affirmed the ruling of Attorney General Bettman in which the company was held taxable under the Ohio law. The previous attorney general had ruled that the excise taxes could not be collected from the utility.

Officials of the East Ohio Gas Co. claimed that piping fuel from West Virginia and Pennsylvania into Ohio amounted to interstate commerce and as such the State had no authority to levy tax.

The decision sets a precedent and makes other utilities liable to taxes of nearly $1,000,000 under the same circumstances, Bettman said.

NEW O.N.G. INDUSTRIAL RATE

New industrial rates have been announced by the Oklahoma Natural Gas Corp: First 100,000 feet per month, 35 cents per 1,000; next 20,000,000 feet, 10 cents per 1,000; next 2,000,000 feet, 12 cents per 1,000; next 6,000,000 feet, 11 cents per 1,000; next 20,000 feet, 10 cents per 1,000 feet. When the gas consumption exceeds 30,000,000 feet, the rate of 10 cents per 1,000 feet will apply. The new rate applies to 63 cities and towns served by the Oklahoma Natural in Oklahoma.

GAS COMPANIES ACTIVE NEAR HUGOTON, KANSAS

There is considerable drilling activity in Stevens and Morton Counties, Kansas, by companies seeking gas, especially in the Hugoton area, which lies directly north of the Panhandle Field of Texas and is very similar to it geologically.

With the intensive campaign under way in the Panhandle area for gas for several large eastern cities and trunk lines being laid to Chicago and elsewhere, this work in the Hugoton district has particular significance because it is understood that a second line will be run from that area to Chicago parallel to the line from Panhandle gas fields.

The topography of Stevens and Morton Counties is very similar to that of Gray County in the Texas Panhandle, being largely rolling, sandy and rocky hills with the proven gas area lying in the south breaks of the headwaters of the Cimarron River. The proven gas area is now estimated at 75 square miles.

The gas is being produced from a lime formation found at about 2,700 to 2,900 feet and in this respect is similar to the gas formation in the Panhandle Field of Texas. Up to this time all wells have been completed in this big lime gas zone and no attempt has been made to drill deeper to explore for oil which might be found below the gas if conditions there are similar to those of the Panhandle Field. The rock pressure of the gas formation is about 400 pounds.

About 75 wells have been contracted by the Argus Production Co., a company formed by Arthur K. Lee and Gus Hardendorf, who later sold their interests to the Moody-Seagraves Co. The wells are being contracted for drilling to the top of the big lime with rotary tools and completed with cable tools for the last 100 feet. This last 100 feet of drilling is through a very hard formation.

At this time the Argus Production Co. has completed and capped about 25 wells with an open flow of 150,000,000 feet of gas and has 14 drilling with rotary outfits and seven drilling with cable tools.

Benedum-Trees Co. of Winfield, Kans., has two completed gas wells and has three tests drilling with rotary tools and one drilling with cable tools.

William McNabb of the Southwest Oil & Gas Co. with headquarters at Winfield, Kans., has three completed gas wells, three wells drilling with rotary outfits and one well drilling with cable tools.

The Sultana Drilling Co. of Hugoton, Kans., is doing most of the drilling for the Argus Production Co. A. F. Lanier is manager of this company.

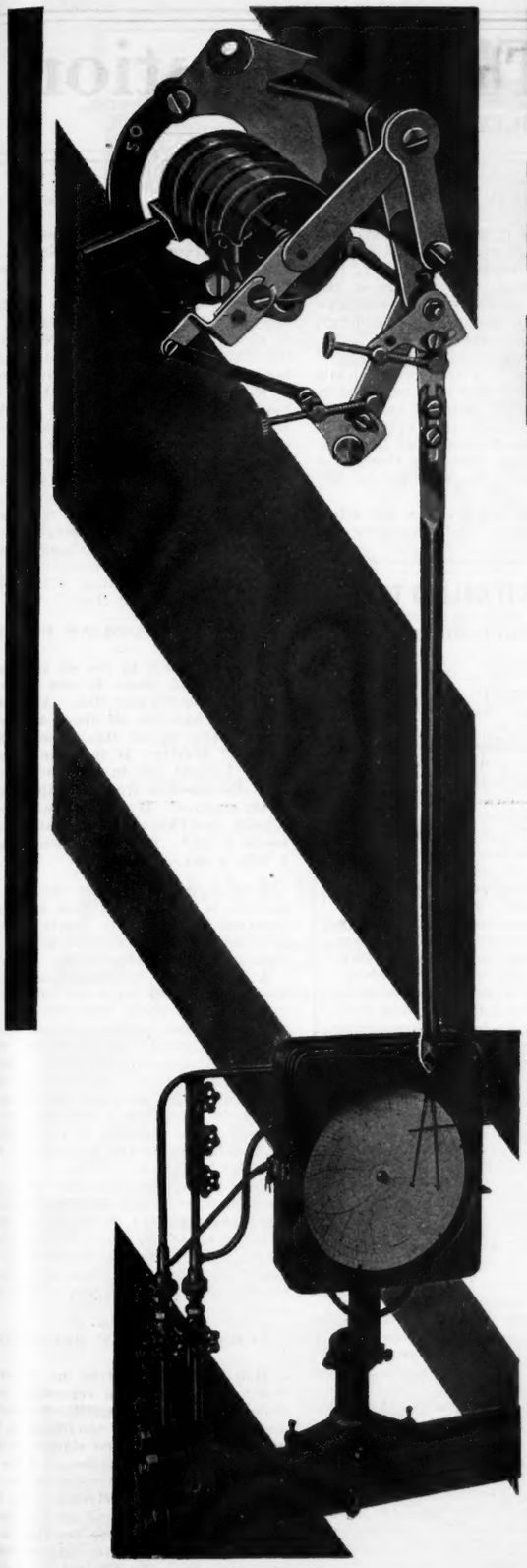
Most wells are completed by setting the 8¼-inch casing at from 2,700 to 2,900 feet and cementing it. This leaves the well in excellent condition for deepening at some future date in the event it is necessary either to increase gas production or to explore for oil.

FAMILY FUELS

At the beginning of 1930 nearly 50 per cent of all families in the United States used gas for cooking. The statistics disclose that while 7,700,000 families use coal or wood, 875,000 electricity and 6,500,000 oil, a total of 13,700,000 employ gas. During 1929 the American public purchased 1,130,000 new gas ranges, 900,000 oil ranges, 158,000 electric ranges and 900,000 coal or wood ranges.

GAS STORAGE TEST

CHATHAM, Ontario, July 5.—The Canadian Western Natural Gas, Light, Heat & Power Co. of Calgary has commenced the actual storage of surplus gas from the Turner Valley Field in the depleted sands of the Bow Island Field.



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EMCO METERS AND REGULATORS

Field Problems and Their Solution

EDITED BY THOMAS F. SMILEY

In order that men connected with the drilling, producing and transporting branches of the petroleum industry may procure quickly a solution of many problems confronting them from time to time in their work, The Oil and Gas Journal has arranged with leading engineers and other recognized authorities to answer questions submitted by readers of this publication pertaining to the work of drilling and producing crude oil and transporting this product.

Everyone is invited to submit questions freely. These questions will be submitted to proper authorities by Mr. Smiley, who edits the page, and answers, based on the best available information, will be published. Each question should give as much detail as possible, especially where it relates to matters where depths of sands, types of sands and operations on adjoining properties would have a bearing on the problem involved. The source of all questions will be considered as confidential and only initials will be published in connection with the question.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or practices which are improvements.

In case an immediate answer is important, one will be given by mail if the writer requests it.

UTILIZING CARBON DIOXIDE

Where could I get information as to what kind of plant is required to manufacture dry ice from natural carbon dioxide gas, also the cost of the manufactured product? How pure would the carbon dioxide have to be to make it available for making dry ice? Is the manufacture of dry ice in this way being undertaken on a large commercial scale by any of the big owners of natural gas properties?—H. C. P.

It may interest you to know that south of Laramie, Wyo., are wells that will produce several million feet of this gas daily that are not now utilized. This gas contains about 6 per cent hydrocarbon products and because of this it is not suitable for use in making dry ice. The machinery necessary to remove this hydrocarbon gas is so costly that at this time nothing is being done with the 94 per cent carbon dioxide gas although its possibilities for making dry ice are fully realized by the owners of the well.

This department has at hand no detailed information which would be of use to you concerning either the kind of plant required for the manufacture of dry ice or the cost of the manufactured product.

The Continental Oil Co. recently was reported to have made an agreement with the Dry Ice Corp. of America to develop lands near Walden, Jackson County, Colorado, for the purpose of obtaining carbon dioxide for refrigeration. The Dry Ice Corp. was to erect a pilot plant to extract hydrocarbons and purify the gas produced from gas wells already drilled on this land.

After the pilot plant is completed and satisfactory results are obtained, a new corporation was to be formed and financed, it was said, for the production of dry ice from this particular type of natural gas, the product to be distributed and sold by the Dry Ice Corp. of America.

Continental now has one well on the property which is producing carbon dioxide 98 per cent pure and about 110 degrees below zero. The well is known in the oil business as the "ice cream" well, from the fact that the fittings are covered with snow and ice.

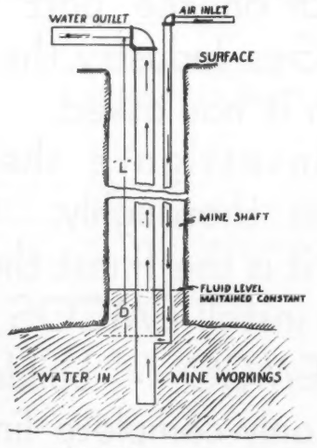
Gas of any kind is not of much value unless found in large quantities and in formations that promise to be productive for a long time.

WORKING FLUID LEVEL

Will you kindly advise the accepted theory as to the working fluid level of a well on gas lift flowing through tubing? A believes it is at the bottom of the tubing or slightly below. B thinks it is above and not parallel with the bottom of the tubing. L. C. Uren's article in the April 28, 1929, issue of The Oil and Gas Journal contains a diagram that agrees with B's idea, but many other books bear out A's theory.—W. B. A.

Your question is a very technical one and it is only logical to assume that either conclusion might exist in wells of different character. As it is impossible to observe the action of the gas and oil at the bottom of a well, conditions there must be assumed and it is probable that the number of persons who agree with A concerning the position of the fluid at the bottom of the well is just about the same as the number who side with B.

The only direct evidence obtained was from S. F. Shaw, consulting engineer



"L" LIFT
"D" DIP—ACCURATELY DETERMINED

for the Carter Oil Co., who advises that in air lift in mine work he actually has measured the relative dip and lift of fluid columns and placed the air inlet at the exact distance below the fluid level so that the output of the system balanced the input of water from the mine.

This is illustrated best by the accompanying sketch and in this instance it must be remembered that the flow of water into the mine is practically constant and the air lift is used not to unwater the mine, but rather to keep this water level below active workings in the property. In an oil well it is assumed that the reservoir is being depleted constantly and no new supply of oil added. Therefore, the fluid level will vary with the changing conditions in the producing horizon.

It is regretted that this department cannot obtain authoritative data from which to decide your argument by one definite statement. If you have followed Mr. Pence's series of articles that were started in The Oil and Gas Journal April 18, 1929, you have a working knowledge of the air-gas lift problems and at this stage of development that seems about all that anyone has.

RELATION BETWEEN PRESSURES

I have heard a good deal about pressure control of flowing wells and will appreciate your explaining whether this control is applied to the tubing or the casing. Also outline the relationships existing between pressures in the different parts of the system.—D. E. I.

Your question is a very practical one and it so happens that it is answered in detail in an article prepared by the late R. R. Brandenthaler that appeared in The Oil and Gas Journal April 21, 1927, under the heading "Pressure Control in Flowing Wells." In this article Mr. Brandenthaler says:

"A change in rock pressure will affect the tubing pressure, casing pressure and differential pressure, but it will not affect the trap pressure.

"A change in tubing pressure will affect the differential pressure and casing pressure; also, a change in casing pressure will affect the tubing pressure and differential pressure.

"Trap pressures are not affected by rock pressure, casing pressure, tubing pressure or differential pressure, unless the traps are required to handle gas and oil beyond their capacity.

"Trap pressures will affect the differential pressure, tubing pressure and casing pressure and any change at the well head, whether differential pressure, tubing pressure or casing pressure, will affect the pressures in the well.

"Any change in rock pressure results in a change in the tubing pressure, casing pressure and differential pressure.

"When any sudden or unusual change in well-head pressure occurs (for example, an erratic tubing pressure), and when a sudden decrease in oil or gas takes place, it is always advisable to note whether the trap pressure has changed. If the trap pressure has not changed, note whether the oil line from the trap to the flow tank has become clogged, as would be evidenced by a rise in the oil level in the trap. If the oil line is functioning properly, and if the trap pressure has not changed, the flow line from the well to the trap should be inspected. If it is free from obstructions, then changes in the differential pressure, tubing pressure and casing pressure must be due to changed well conditions.

"Fluctuations in trap pressure, provided the traps are not overloaded, are due to fluctuations in pressure in the gas line leading from the trap.

"When flowing wells are produced through tubing and not the casing, two flowing pressures are recorded, namely, the tubing-head pressure and the casing-head pressure. The tubing-head pressure is measured in the tubing at the well head between the well and the flow bean or valve and indicates the back pressure, at that point, on the flowing oil. The tubing-head pressure has a direct bearing on the actual back pressure on the oil sand. Also it is the pressure against which the natural gas lift must work. Regardless of what the casinghead pressure may be, the tubing-head pressure must always be considerably lower than the pressure at the bottom of the tubing, else the well will not flow."

WHY WAS IT CALLED THAT?

FINGER-BOARD

To most folk a finger-board is the neck-like part of a violin or other string musical instrument against which the strings are pressed to produce the tone desired, and there is a natural disposition to seek some relationship between this finger-board and the one used in oil production. There is none.

To the oil man a finger-board is the plank he lays from one girt to another in a derrick to support rods or tubing as they are pulled from the well. Why it should be called a finger-board is a mystery till it is ascertained that it formerly was common practice to cut deep notches in the edge of the plank. The joints of rods or pipe were hung in these notches as they were drawn from the hole, thus minimizing the danger of the threads being damaged by rubbing together.

The notches of course left projections bearing at least a fancied resemblance to the fingers of a hand.

WANTS A GASOLINE PLANT

I am interested in the oil business in Kentucky and there is one lease on which I have no pipe line. As a result I have to haul the oil about 4 miles by truck. The oil on this lease is light, about 47 gravity. Is there any way by which I could put in equipment to extract the gasoline from it without going to big expense? If so, about what would it cost and about what test gasoline would I get? The production is about 3 bbls. a day.—L. W. S.

Your desire to convert this oil into gasoline is natural, but this department does not know of any practicable way in which you could do this with a production of only 3 bbls. a day.

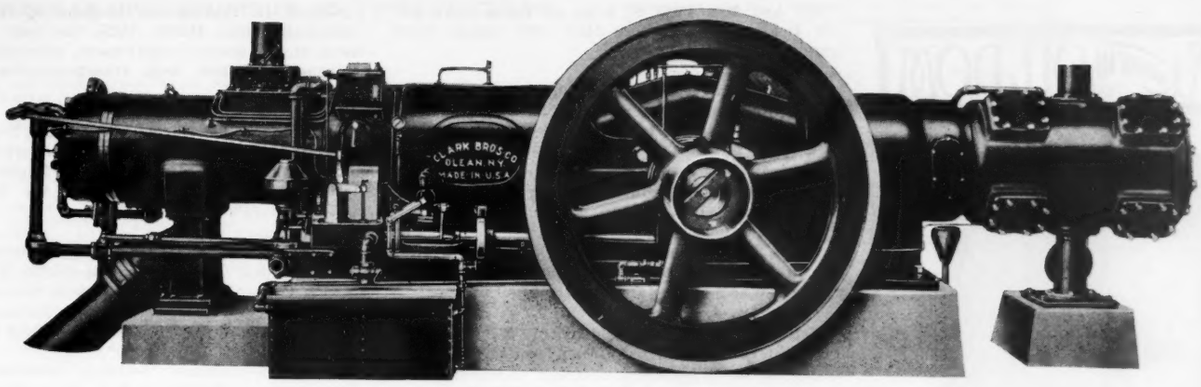
A simple type skimming plant would cost about $1,000 per barrel of capacity, complete, and about 500 bbls. per day is the smallest practical size unit that could be erected. Even if you could skim gasoline from your oil it is hardly probable that you could extract more than 25 or 30 per cent, which would still leave you over 2 bbls. of gas and fuel oil to be disposed of and probably at a point where the demand for such material is limited.

Your best plan apparently is to store your oil in gas tight tanks and accumulate it in sufficient quantities to permit it to be hauled by truck to the nearest market. Or you might barrel it as produced and ship it in this way, having the barrels returned to you as they were emptied.

TURNER VALLEY QUESTIONS

Will you please advise us where we can get expert advice regarding operations in the Kettleman Hills district? It appears to us that our conditions in Turner Valley are somewhat similar to those encountered in the Kettleman Hills and we are particularly interested in the control of the gas in its relation to the back pressure on the well and on the separator. As you may know, freezing is our greatest trouble and the application of back pressure is a vital factor. Any information in this connection, as well as what is considered the best method of separation will be appreciated.—J. C.

The following articles that have appeared in recent issues of The Oil and Gas Journal deal directly with the problems presented by you and should be of immediate assistance to you: "Problems of Drainage at Kettleman Hills," by Stanley C. Herold, March 27, 1930, page 40; "Operations in Kettleman Hills Field," by R. I. Brown, April 3, 1930, page 39, and "Methods for Controlling Gas Production in California," by R. H. Pence, May 8, 1930, page 59.



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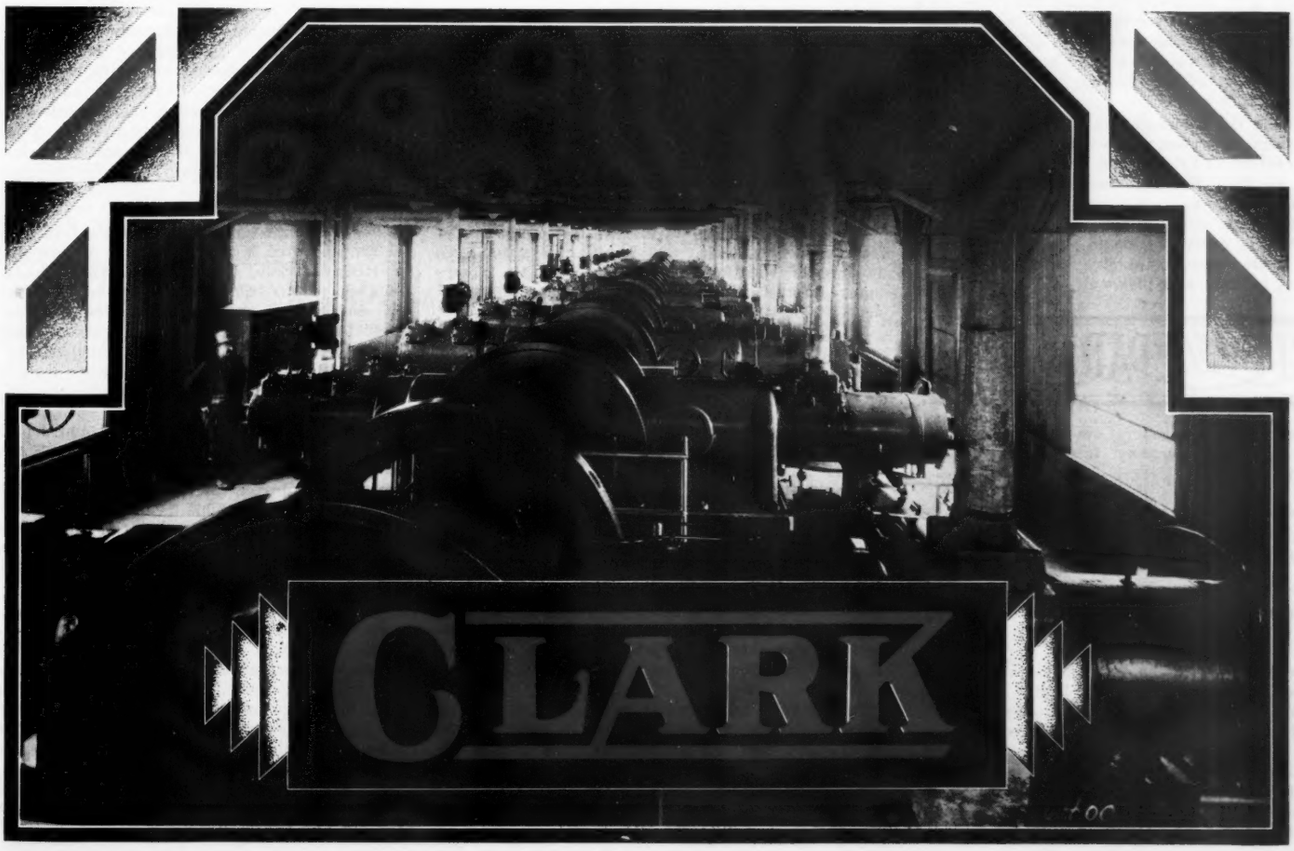

MEN KNOWN IN OILDOM

John S. Freeman

John S. Freeman, assistant to H. M. Stalcup, vice president in charge of production of the Skelly Oil Company, was born in Southwest City, Mo., in 1897. He was 2 years old when his father died. His mother then moved to Bartlesville, Okla., where he left high school to go to work for the Barnsdall Refining Company, whose main offices at that time were in Bartlesville. In 1917 Mr. Freeman left the Barnsdall to enter the accounting department of the Phillips Petroleum Company. The next year he enlisted for war service. After the war had ended he returned to Bartlesville as chief accountant for Phillips.

Mr. Freeman was transferred to Ranger, Tex., when the boom was on in that region. At that time the Texas division of the Phillips company functioned as a separate unit and Mr. Freeman's duties were those of secretary and treasurer for the district. In 1920 he decided to gain first-hand knowledge of field operations and he went into the Burbank district of the company as a roustabout, gauger and tool pusher.

The Skelly Oil Company had a great deal of production from properties which it owned jointly with other operators and which the co-partners were operating. In 1923 Mr. Freeman went to work for Skelly as contact man on these partnership operations. This brought him in contact with every phase of oil property development and production. In 1925 he was made assistant to Mr. Stalcup. Mr. Freeman likes to hunt and play golf.

PERSONAL PARAGRAPHS

George H. Jacques, general superintendent of the Midwest Refining Company, has been visiting in Colorado.

* * *

John G. Bartram, geologist for the Midwest Refining Company, Denver, Colo., has been visiting Wyoming.

* * *

Henry L. Doherty, president of the Cities Service Company, was in Los Angeles, Calif., last week. He has returned to the East.

* * *

George Fisher, with the Pan American Petroleum & Transport Company at the Island of Aruba, Dutch West Indies, is expected in Casper, Wyo., to spend a vacation.

* * *

A. J. Hardendorf, of Dodge City, Kans., and Mrs. Hardendorf, have taken a summer home in Casper, Wyo. Mr. Hardendorf recently sold his interests in the Argus Gas Company.

Mr. and Mrs. Paul S. Ache, of Tulsa, have left for Denver, Colo., where they will remain until autumn.

* * *

A. D. Aiken, vice president of the Midwest Refining Company, Denver, Colo., has been visiting the Casper, Wyo., offices.

* * *

John J. Beatty, of the general office at Tulsa, has been transferred to the Chicago office of the Cities Service Oil Company.

* * *

W. H. Price, manager for Black, Sivalls & Bryson, Inc., of Bartlesville, Okla., has returned to his Casper, Wyo., offices from a trip to Calgary.

* * *

Griffith Henshaw, president of the Riverside Portland Cement Company, has been elected a director of the Gilmore Oil Company of California.

* * *

H. S. Bossart, assistant general superintendent of the Midwest Refining Company, has been inspecting northern Wyoming and Montana operations.

* * *

James A. Black, of the North American Company, and Guy C. Earl of San Francisco, have been elected directors of the Pacific Gas & Electric Company.

* * *

Frank Redick, master mechanic for the Mid-Kansas Oil & Gas Company in the Yates Pool, Pecos County, Texas, is visiting in Ohio for two or three weeks.

* * *

James J. Brown, scout and land man for the Vickers Petroleum Company of Wichita, Kans., and family, left for Chicago, Ill., where they will spend a month.

* * *

J. C. Dallas, president of Calmont Oils, Ltd., who recently returned from England, has announced that a group of British capitalists will visit Calgary this summer.

* * *

C. W. Chancellor, with the Prairie Oil & Gas Company in Tulsa, has been transferred to Oklahoma City, Okla., in charge of the land department office there.

* * *

R. A. Crawford, vice president and general manager of the Lone Star Gas Company, who was seriously ill in a Dallas, Tex., hospital for several weeks, has recovered.

* * *

John L. Alden, supervisor of the United States Geological Survey, has arrived in Muskogee, Okla., with his family from Taft, Calif., where he was formerly deputy supervisor.

* * *

L. D. Mann, assistant general superintendent of refineries for the Empire Oil & Refining Company, has been spending the past week in the Cities Service Company's offices in New York.

* * *

Thomas B. Slick, independent oil operator, of Oklahoma City, Okla., and family, are spending a few weeks' vacation in Baltimore, Md. Mr. Slick's many interests keep him busy in the Mid-Continent Field.

* * *

J. A. Campbell, president of the J. A. Campbell Company, was a guest speaker last week at the Taft branch of the California Natural Gasoline Association, at which time he spoke on "The Problem of Mist Elimination."

* * *

I. H. Shearer, treasurer of the Kendall Refining Company, at Bradford, Pa., and president of the Bradford Airport Club, was among the guests at the recent banquet tendered Rear Admiral Richard E. Byrd in New York.

* * *

H. W. Camp, general superintendent of refineries for the Empire Oil & Refining Company, and his family, are spending several weeks visiting his parents in the State of Washington, and will visit other Pacific Coast points.

* * *

Robert E. Kean, formerly manager of the Moran properties in South Texas, is now in charge of the Moran Gas Company at Aransas Pass, Tex. L. D. King, formerly of Aransas Pass, has assumed control of the Moran properties for the United Gas Company which purchased the Moran Gas Corporation.

Gerald R. Preston, an employe of the Empire Companies since March, 1925, has been appointed head of the budget department, succeeding Q. R. Dungan who has been transferred to the gas division.

* * *

John Glahn has joined the Indian Territory Illuminating Oil Company's personnel division. Mr. Glahn has been a reporter on the Bartlesville Examiner and has had service with the Enid News and Miami (Florida) Herald.

* * *

"Herb" Dailey, of the sales department of Midwest Refining Company, was a visitor in the company's Casper, Wyo., headquarters from his home in Denver, Colo. Mr. Dailey was formerly at the head of the land department with offices in Casper.

* * *

James N. Purman, formerly representing the Wayne Pump Company, has accepted a position with the Parkersburg Rig & Reel Company and will be located at Bartlesville, Okla. Mr. Purman has moved from Montpelier, Ind., to his new headquarters.

* * *

George F. Prussing, safety engineer of the Union Oil Company and an authority on safety and fire prevention work, was the principal speaker at the last meeting of the California section of the American Society of Mechanical Engineers held at Los Angeles, Calif.

* * *

C. M. Stalty has returned to the United States for a vacation after having spent the past five years in the Dutch East Indies. Mr. Stalty is employed by the Standard Oil Company of New Jersey and was at one time located with the Carter Oil Company office in Bremen.

* * *

William Little, chief industrial engineer for the Cities Service Gas Company since 1928, has been transferred to general superintendent of the Arkansas Natural Gas Corporation distribution properties in Arkansas, including the Little Rock Gas & Fuel Company and other properties.

* * *

Mrs. James Crosbie and two sons, of Casper, Wyo., are en route to the Island of Aruba, Dutch West Indies, to join Mr. Crosbie who is in the employ of the Pan American Petroleum & Transport Company there. Accompanying them is Mrs. Carl Walker who will join her husband in Aruba.

* * *

John M. Abrams, Los Angeles oil man, accompanied by Richard F. Bailey of Patterson, Bailey & Morgan, Los Angeles attorneys, spent several days in Houston, Tex., making a survey of the Coastal crude oil situation and available crude sources. Leaving Houston they went to New York City for a brief stay. Mr. Bailey formerly made his home in East Central Texas in the Corsicana district.

* * *

The marriage of Miss Dorothy Danford, daughter of Mr. and Mrs. Mark O. Danford of Casper, Wyo., and Denver, Colo., and James Morris Page, Jr., also of Casper, was celebrated in Denver. The bride is the daughter of the tax commissioner of the Midwest Refining Company, and the groom, employed in Casper by the Standard Oil Company of Indiana, is the son of Dr. J. M. Page, dean of the University of Virginia.

* * *

Walter Markham has joined the land department of the Prairie Oil & Gas Company in Tulsa and has been acting for Frank Gray, head of the leasing division, during the latter's vacation. Mr. Markham, notwithstanding his lack of years, is a veteran oil man in the Mid-Continent Field. Ill health forced him to retire a few years ago, but he is back in the industry fully recovered and with all his old energy restored.

* * *

Indian Territory Illuminating Oil Company announces changes in its personnel: Clarence M. Rader has been moved to Oklahoma City, Okla., acting as special assistant to A. V. Hoenig, vice president in charge of production. Fred A. Lichenheld, assistant superintendent of production, Bartlesville, Okla., district, has been assigned to the core drills in the same department. F. E. Turner, formerly field superintendent of the Foster Petroleum Company, has been made assistant superintendent for the Bartlesville district.

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

(Continued from Page 48)

J. M. Russell's No. 1 A. O. Miles, 1,600 ft. N line, 600 ft. W line 450-ac. tract, Angel Navarro Sur., 10 miles S from San Antonio ..... T. D. 410 ft.; drlg. in sandy shale.

Henry Yelvington et al's No. 1 Beck, 355 ft. from W line, 310 ft. from S line 100-ac. tract, SW cor. of P. W. Hays Sur., 7 miles E from San Antonio ..... T. D. 1,470 ft.; shut down.

Louis Wentz' No. 1 J. Cassiano, 150 ft. N and E line of J. Cassiano 400 ac. in J. Monte Sur. ..... T. D. 2,150 ft.; drlg. in lime.

CALDWELL COUNTY

Hinton et al's No. 1 Williams, 150 ft. N line, 150 ft. W line in J. H. Bowman Sur. ..... T. D. 2,475 ft.; abandoned.

W. E. Allaun's No. 1 Cosey, SW cor. of tract ..... Location.

W. E. Allaun's No. 2 McKean, 300 ft. W of No. 1 ..... Location.

Keen & Malcolm's No. 1 Mollie McNeal in the George Kimball Sur., 2,500 ft. W line, 860 ft. N line, 1 mile S from old Luling Field ..... T. D. 2,430 ft.; abandoned.

COLORADO COUNTY

Penn Oil Co.'s No. 1 H. C. Wilson, 450 ft. from W line, 450 ft. from E line of 50-ac. tract in the John McCrosky Sur., 5 miles E from Columbus ..... T. D. 3,000 ft.; drlg. in sand and shale.

DEWITT COUNTY

Russell & Slick's No. 1 G. W. Weisgarver, 619 ft. N line, 1,200 ft. E line of 125-ac. farm in W cor. of county in the W. M. Lytle Sur. ..... T. D. 3,104 ft.; abandoned.

H. T. Roe's No. 1 Leinhardt ..... T. D. 2,215 ft.; shut down.

DUVAL COUNTY

Vacuum Oil Co.'s No. 1 C. W. Hahl, Sur. 280 ..... Location.

Sal Oil & Gas Co.'s (Southern Oil Co.) No. 2 Welder-Wood, 1,980 ft. E line, 2,490 ft. N line Sur. 215 ..... T. D. 100 ft.; drlg.

T. W. Callahan and W. M. Howard's No. 1 J. M. Luby, 3,960 ft. N line, 3,960 ft. W line Sur. 24 ..... T. D. 3,410 ft.; drlg.

Putnam & Walsh's No. 1 Hagist, 570 ft. N line, 150 ft. E line, Blk. 5, Sur. 269 ..... T. D. 1,200 ft.; drlg.

EDWARDS COUNTY

Phillips Pet. Corp.'s No. 2 A. G. Holman, 330 ft. from N and E lines of SE of tract, C.C.S.D.&N.G.R.G. Sur. No. 25 ..... T. D. 3,880 ft.; drlg.

FAYETTE COUNTY

Muldoon Oil Co.'s No. 1 J. A. Kerr, 2,900 ft. from S, 3,250 ft. from W of M. Muldoon Sur., 2 miles W of Muldoon ..... T. D. 3,475 ft.; abandoned.

Hoffer-Stanton's No. 1 M. E. Manton, 700 ft. from N line, 275 ft. from E line 102-ac. tract in the W. H. Taylor Sur., 8 miles NE from Muldoon ..... T. D. 2,840 ft.; abandoned.

GOLIAD COUNTY

Union Prod. Co.'s No. 12 George Ray, 2,350 ft. SW of NE line, 330 ft. NW of SE line George A. Ray 400 ac. in the Wm. Southerland Sur. ..... T. D. 1,216 ft.; drlg. in shale.

A. G. Riemenschneider's No. 1 A. T. Fromme, 275 ft. from N line, 912 ft. W line of 300-ac. tract, P. Dexter Sur. ..... T. D. 1,114 ft.; drlg. in shale and boulders.

Wm. F. Morgan's No. 1 Peirrie, 7,600 ft. SW of NE line, 2,550 ft. SW of NW line of Fannie Peirrie 2,350-ac. tract, SW part of county in the Vincente Ramon Sur. ..... T. D. 5,150 ft.; drlg.

GONZALES COUNTY

Mardon Oil Co.'s No. 1 Boirer, 150 ft. N and W lines in the James Stewart Sur., 5 miles NW from Waelder ..... T. D. 1,850 ft.; shut down.

Linden Pet. Corp.'s No. 1 Hemsley, 650 ft. N line, 1,110 ft. W line of J. W. Hemsley 100 ac. in the James Smith ..... Rig up.

Acme Oil & Royalty Corp.'s No. 1 Weber, Thomas Wright Sur. ..... T. D. 2,350 ft.; shut down.

A. J. Keiffer et al's No. 1 B. B. Dix, 5,550 ft. W of E line, 2,775 ft. N of S line (Guadalupe River) in the Ira Nash Sur., 4 miles SE from Darst Creek ..... T. D. 2,800 ft.; shut down.

Finnell & Elam's No. 1 J. F. Robinson, 2,000 ft. N line, 4,420 ft. E line, in the J. H. Livergood, 2½ miles NE from Waelder ..... T. D. 2,545 ft.; shut down

GUADALUPE COUNTY

Adams & Lyles' No. 1 Denman, 838 ft. W line, 1,000 ft. N line of G. Denman 491-ac. tract in the William Havington Sur. ..... T. D. 800 ft.; drlg. in sand and shale.

Cranfill & Reynolds' No. 1 McIntire, 150 ft. to E line, 150 ft. to S line of 100-ac. tract in the A. Gibson Sur., 6 miles SE from Seguin ..... Location.

Grayburg Oil Co.'s No. 2 Wells, 5,730 ft. E line, 2,490 ft. S line of NE cor. of Wells tract in the James D. Baume Sur., 6 miles SW from Darst Creek ..... Waiting on drilling rig.

Cranfill & Reynolds' No. 1 Wilson, 150 ft. S line, 1,200 ft. to W line 92-ac. tract in the Jesus Canter Sur., 8 miles SE from Seguin ..... Location corrected.

Brown Hinds et al's No. 1 George Altzger, 1,300 ft. from SE line, 1,100 ft. from SW line, of 120-ac. tract in A. Mansola Sur. ..... T. D. 1,975 ft.; drlg. in lime rock.

Hadley et al's No. 1 Hartwig, 2,000 ft. S-N line, 930 ft. E-W line of survey, Wm. Hartung 656-ac. in the Richard Nixon Sur., 6 miles SW from Darst Creek ..... T. D. 3,175 ft.; abandoned.

Louis Neis et al's No. 1 Voges, 517 ft. to S line, 150 ft. to E line of 150-ac. tract, 150 ft. E line and halfway to N and S line of Joseta Leal Sur. ..... T. D. 300 ft.; drlg. hard shale.

B. L. Rayburn's No. 1 B. Blumberg, 1,120 ft. NW line, 3,000 ft. NE line of Moses Baker Sur. ..... T. D. 300 ft.; drlg. in shale.

Penn Oil Co.'s No. 1 State Land, 1,300 ft. W line J. C. Darst Sur., 1,300 ft. NE line R. Moss 50-ac., near SE cor. J. K. Davis Sur., 2½ miles SW from Darst Creek ..... T. D. 2,550 ft.; drlg. in Del Rio.

JACKSON COUNTY

The Texas Company's No. 1 Mitchell, 1,750 ft. E, 880 ft. N of SW cor. Ewing Sur. ..... T. D. 3,102 ft.; sand; coring.

J. Walsh et al's No. 1 W. D. Wade, 1,035 ft. NE line, 300 ft. NW line of N cor., Lot 1, Blk. C, W. H. Bode Subd. ..... T. D. 210 ft.; set 10-in. surface csg.; W.O.C.

KARNES COUNTY

H. M. Lightfoot et al's No. 1 Barnett in the Alex Hunter Sur., 6 miles N of Karnes City ..... T. D. 2,916 ft.; preparing to deepen from abandoned depth, was carried as J. G. Fisher et al.

J. F. Morrisey et al's No. 1 Ragsdale, 660 ft. SW of C of NE line of 170-ac. farm in the McCouli Sur. .... T. D. 1,335 ft.; drilled plug; bailing.

Dr. Hewitt's No. 1 W. E. Porter, 650 ft. from N line, 700 ft. from W line of 416-ac. tract in the Victor Blanco Sur., 8 miles SE from Runge ..... T. D. 2,700 ft.; drlg. in shale.

Moody-Seagraves' No. 1 W. W. Boyce, 2,110 ft. from E line, 487 ft. from S line in the W. W. Boyce Sur. .... T. D. 3,640 ft.; drlg. in sandy shale.

Mundine Investment Co.'s No. 1 A. D. Wilburn, C of 143 ac. in H. K. Hardy Sur., 3 miles SE from Dunge ..... T. D. 730 ft.; drlg.

KENDALL COUNTY

Borgett et al's No. 1 Haag, W. Avery Sur. ..... T. D. 840 ft.; drlg. in hard lime.

A. S. Mowinkle's No. 1 Kaston, 150 ft. from N line, 150 ft. from E line of tract, Sur. No. 724, 9 miles due W of Kendalia ..... T. D. 544 ft.; reaming hole in shale.

Sitten et al's No. 1 Garvin, C of NE of D. L. Richardson Sur. in the D. L. Richardson Sur., 1 mile NE from Kendalia ..... T. D. 550 ft.; shut down.

Dickinson et al's No. 1 Edmondson, 150 ft. from S line, 350 ft. from W line of tract in the J. O. Blair No. 72 Sur., 1 mile NW from Kendalia ..... T. D. 40 ft.; spudded in and shut down.

Dixon Oil Co.'s No. 1 Ottmer Behr, W of H.T.&B.R.R. Sur., 3½ miles SE from Sisterdale ..... T. D. 1,755 ft.; hard lime; shut down.

P. B. Sterling's No. 1 McCracklin, 1,350 ft. from N line, 250 ft. from W line of the B. G. Owens Sur., 4 miles W from Kendalia ..... T. D. 380 ft.; drlg. in shale.

C. R. Dutton's No. 1 J. Lawhon, Sec. 10, 2,475 ft. E line, 1,488 ft. S line ..... Location.

KERR COUNTY

Evans et al's No. 1 Love Ranch, 100 ft. from S line Sur. 1,597, 1,000 ft. E of W line of J. Martinez No. 1,594 Sur. ..... T. D. 480 ft.; drlg. in lime rock (corrected location).

KLEBERG COUNTY

Bowen & Sarles' No. 1 Robert, H. Simmons in the A. Houston Sur. No. 611, Sec. 7, King Subd., 150 ft. out of NW cor. of SW ..... T. D. 1,580 ft.; shut down; repairing rig.

KINNEY COUNTY

Magnolia Petroleum Co.'s No. 1, SE cor. of Blads Sur., near S.P.R.R., close to Blume test on Wardlow ranch, W part of county, 2½ miles from Blume ... T. D. 2,450 ft.; drlg. in hard lime.

A. Blume et al's No. 2 Herbst, 1,731 ft. W and S lines of Sur. in the Poindexter-Burns Sur. ..... T. D. 275 ft.; shut down.

KIMBLE COUNTY

Lindley Bros.' No. 1 Anderson, Sec. 178, Mubenger Sur.. T. D. 990 ft.; shut down.

C. L. Bryant et al's No. 1 Lambert, 7,700 ft. N and W lines of L. Lotta Sur. ..... T. D. 685 ft.; shut down.

LIVE OAK COUNTY

O. Stalley et al's No. 1 Nichols, 2,000 ft. from W line, 500 ft. from S line in the Ayers Sur. ..... Location.

Dougherty et al's No. 1 Jim Dougherty, 2,254 ft. SE of NW line, 750 ft. NE of SW line of M. Boren Sur. ..... T. D. 3,860 ft.; shut down.

McMULLEN COUNTY

E. H. Coquot's No. 1 Fahler, 2,300 ft. to N line, 300 ft. E line of 1,000-ac. tract in G. Pettuk Sur. ..... Location.

Mazul Pet. Co.'s No. 1 Martin, 150 ft. NW line, 150 ft. to SW line of E. Melon No. 212 Sur. ..... Spudded in.

MAVERICK COUNTY

Rycade Oil Corp.'s No. 6 Chittim, 1,445 ft. from S, 320 ft. from W of Sec. 116, Blk. 7, I.&G.N. Sur. ..... T. D. 2,636 ft.; shut down.

Rycade Oil Corp.'s No. 5 Chittim, 600 ft. W of No. 3 Chittim, 500 ft. E line, 225 ft. from S line of SE Sec. 115, Blk. 7, in the I.&G.N. Sur. ..... T. D. 4,150 ft.; drlg. in gray lime.

Rycade Oil Corp.'s No. 5 Sullivan, in C of Sec. 82, Blk. 7, in the I.&G.N. Sur. ..... T. D. 6,505 ft.; drlg. in broken lime.

MEDINA COUNTY

Pat Armstrong's No. 1 C. W. Butts, in George C. Hanson Sur. ..... T. D. 1,860 ft.; tested sulphur water; drlg. deeper.

Pearson Oil Co.'s No. 1 Whiteside, 200 ft. N and W lines, Sec. 39, Blk. 9-A, in the H. W. Hewitt Sur. .. Spudded in; dropped from reports; duplication.

Lynko Oil & Gas Corp.'s No. 1 Irrigated Farms, 160 ft. from E line, 500 ft. from S line of 36-ac. tract, Lot 50, Blk. 2, in the S. A. Trust Sur. ..... Location.

Kirby Pet. Co.'s No. 1 J. M. Fusselman, Sec. 208, 150 ft. from S and E lines in the S. Castro Sur. ..... T. D. 1,695 ft.; drlg. in Buda.

Pearson Oil Co.'s No. 6 Medina Valley Inv. Co., 2,500 ft. S and E line of lease of Isom Palmer Sur. ..... T. D. 600 ft.; drlg. in shale.

Pan American Pet. Co.'s No. 1 Antoine Hart, in Harrison Sur. No. 799, 15 miles S from Hondo ..... T. D. 1,165 ft.; drlg. deeper; 2-bbl. well at 1,157 ft.

National Oil Co.'s No. 1 Howard, 1,750 ft. E of W line, 1,854 ft. N of S line of survey in the John George Sur. No. 9, 10 miles S of Dunlay ..... T. D. 730 ft.; using rock bit.

Sun Oil Co.'s No. 1 Edgar, 450 ft. from E line, 150 ft. from S line of 320-ac. tract in the J. Buell No. 362, 3 miles N from Noonan ..... T. D. 800 ft.; drlg. in Anacacho.

Sunflower Oil Co.'s No. 1 M. Modfield, 3,340 ft. from E line, 1,335 ft. S line of 640-ac. tract, Sur. 532, 10 miles S from Hondo ..... T. D. 963 ft.; deepened; on pump; small well.

Donaldson Oil & Dev. Co.'s No. 2 Hillenmeyer, James Hillenmeyer No. 25 Sur., 500 ft. to E line of Sur., 150 ft. to S line of N half of Sur. ..... T. D. 200 ft.; shut down.

Pat Armstrong's No. 1 Crawford, 1,389 ft. N line, 2,550 ft. E line of Sur., 478.6 miles W from Devine ..... T. D. 400 ft.; shut down.

NUECES COUNTY

R. A. Thompson, trustee, et al's No. 1 Lawrence Harrell, 300 ft. N of S line and equal distance from E and W lines of Blk. 19, Sheppard farm lots subd., 4 miles W of Corpus Christi ..... T. D. 935 ft.; drlg.

SAN PATRICIO COUNTY

George B. Pickett's No. 1 Baldwin, 9,000 varas due E of Denton, 1,200 ft. S of the SE cor. of O'Neil Sur., Abstract 211 ..... T. D. 3,158 ft.; drlg. in sandy shale.

Cosden Oil Co.'s No. 1 Schmolsteig, C of SE Sec. 9, H. Powell Subd. in the B. Blanchard Sur. ..... Location.

LaFeria Oil & Gas Co.'s No. 1 C. C. Smith, in J. C. White Sur., 690 ft. to N line, 350 ft. to E line ..... T. D. 3,050 ft.; shut down in sandy shale.

STARR COUNTY

I. V. Maclean's No. 1, Tract No. 5, 1,063-ac., Porcion 81, Juan Jose de la Garza in the Falcon grant ..... Location.

Kush Explin. Co.'s No. 1 ..... T. D. 100 ft.; drlg.

J. L. Smith's No. 1 Welch, Perdernal Sur. ..... T. D. 900 ft.; drlg.

UVALDE COUNTY

Ed Anglin et al's No. 1 U.P.P., 1,500 ft. from NW line, 7,450 ft. to NE line of Manual Leal Sur., 10 miles SE from Uvalde ..... Location.

Waldrop & Welch's No. 1 H. S. Benson, 2 miles NW of Uvalde ..... T. D. 1,616 ft.; drlg. in lime rock.

Waldrop & Welch's No. 1 E. R. Edmonds, 1,750 ft. NW, 7,200 ft. W of Sec. 71, in the A. Gomez Sur., 8 miles S of Uvalde ..... T. D. 1,160 ft.; shut down.

Phantom Oil Co.'s No. 1 Claudt, Sec. 611 ..... T. D. 2,250 ft.; reaming hole.

VICTORIA COUNTY

Attlee Drlg. Co.'s No. 1 M. West, 5,100 ft. to NE line, 1,050 ft. to NW line of 1,800-ac. tract in the P. DeWitt Sur. ..... T. D. 1,160 ft.; drlg. in shale and gumbo.

Lion Oil Ref. Corp.'s No. 2 McFadden, 1,917 ft. W of NE cor., 512 ft. at right angles from N line of the C. O. Edwards Sur., 660 ft. E of No. 1 in the M. J. Travesia Sur. ..... Rig up.

The Texas Co.'s No. 1 A. M. McFadden, 1,550 ft. N and E lines of H. Bonny Sur. ..... Spudded in.

WEBB COUNTY

J. L. Elliot's No. 1 Esperonza Land & Stock Co., 950 ft. from N line, 2,231 ft. E line Sur. 815 ..... T. D. 385 ft.; drlg.

O. W. Killam's No. 8 W. C. Billings, 100 ft. E line, 2,788 ft. S line Sur. 1 ..... T. D. 2,196 ft.; drlg.

WILLACY COUNTY

Weimer-Richardson's No. 1 Elmore ..... T. D. 1,860 ft.; shut down in gumbo.

(Continued on Page 123)

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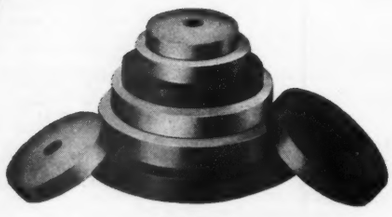

VALVES

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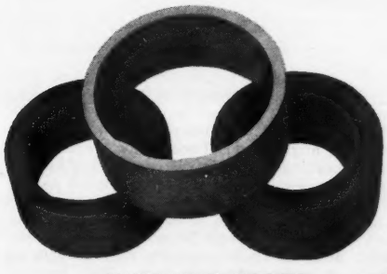
PACKINGS – DIAPHRAGMS

STUFFING BOX RINGS



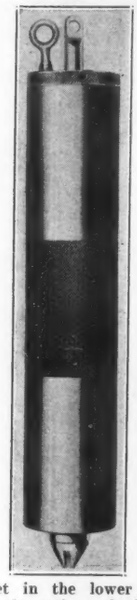
SLUSH PUMP SLEEVES

SUPPLY

EQUIPMENT AND SUPPLIES

OBTAINS THREE SAMPLES IN A SINGLE OPERATION

The Hills-McCanna liquid sampler, made by the Hills-McCanna Co., Chicago, provides a means for obtaining an accurate, composite sample of practically any fluid, quickly and easily. Samples from three levels of tanks or tank cars are obtained in a single operation. Even the extreme bottom of the vessel is reached. The sampler has found wide use in all types of plants—handling large quantities of bulk petroleum, etc.



The sampler, operating on the single plunger suction principle, consists of a hollow metal cylinder 13½ inches in length made of nonsparking metal. A close-fitting piston without packing operates on the inner wall of the cylinder. Interchangeable nozzles for handling liquids of varied viscosity are provided for the outlet in the lower end of the cylinder.

Operation of the sampler is simple. The sampler is lowered into the tank or vessel to the desired depth by means of a length of chain attached to its upper end. A second length is fastened to the plunger rod. This rod is notched at three equidistant points, dividing the cylinder into three parts of equal capacity. By drawing the chain atached to the plunger, liquid is sucked into the lower third of the chamber. The operator is informed when this portion is filled by contact of the upper notch on the plunger rod with a spring ball set in the cylinder neck. The sampler then is raised to a second and third position where successive samples are obtained in the same manner, filling the sampler to its full capacity of 32 ounces. The operator has now obtained an average, composite sample of the contents from the extreme bottom, middle and upper portions of the vessel. By analyzing these samples the exact quality of the liquid is determined.

Briefly, the advantages of the Hills-McCanna liquid sampler, as presented by the manufacturer, are: Obtains an average, composite sample in a single operation in accordance with sampling regulations, regardless of the depth of tank or vessel; samples any fluid, light or heavy, including gasoline, kerosene, lubricating and fuel oils, acids and solutions; saves sampling time and labor; samples are not exposed to rain, wind or dust, thereby preserving the gravity of the samples when transferring to another vessel; takes samples from extreme bottom of tank; detects water in tank bottoms; made of nonsparking metal; no check valves or parts to loosen or wear out; equipped with interchangeable small, medium and large nozzles to be used according to the viscosity of the liquid sampled.

Distribution of the Allis-Chalmers line of equipment for the oil industry in California will be handled by the Oil Well Equipment Corp. of Los Angeles, according to an announcement by the Milwaukee manufacturers. A. E. Hunt, sales engineer, formerly in the Mid-Continent area, will assist the California organization in service and distribution. Stocks are to be carried in Los Angeles.

TUNGSTEN-CARBIDE HOLDERS

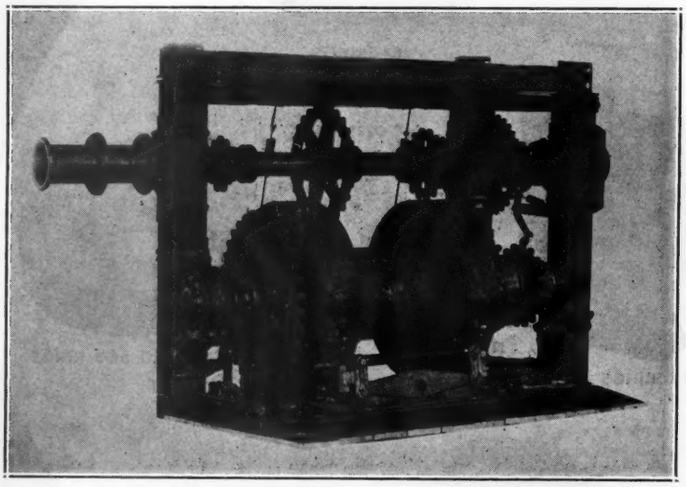
The Armstrong Brothers Tool Co., Chicago, announces a new line of tool holders which the company says makes the use of tungsten-carbide practical for all machine shops and tool rooms. These new tungsten-carbide tool holders are designed to use high speed steel bits tipped with less than an ounce of tungsten-carbide. Because of the brittleness of this new element, the holders are made extremely rigid and are built out under the bit so as to give maximum support to the cutting edge. The new holders are designed for use on lathes, planers and shapers and hold the bit parallel to the shank. They are of two general types: Those broached for the standard square bits and those that take a deeper bit, one in which thickness has been added to compensate for the steel displaced by the tungsten-carbide tip. The manufacturer asserts that these holders not only facilitate the machining of unusual materials but make it practical to machine hardened steels without annealing, sand filled castings, extremely tough alloy steels, as well as to cut ordinary metals at greatly increased machine speeds.

SULLIVAN ADDS A NEW UNIT

The line of portable gasoline engine-driven air compressors made by the Sullivan Machinery Co., Chicago, has been enlarged by the addition of a 66-foot unit. This unit and the 110-foot and 160-foot units, are two-cylinder, vertical machines. The 220 and 310-foot units are four-cylinder balanced twin units, the two pairs of cylinders being set at an angle of 90°. The compressors are driven by direct connection to a Buda four-cylinder, four-cycle engine, with the exception of the smallest unit, in which a Continental engine is used. The company has just issued a 40-page catalog describing these vibrationless portable air compressors. It is printed in two colors and gives full details with dimensions. Fourteen pages are devoted to illustrations of equipment in use in the field. Sullivan portable electric-driven units are described.

The Murray Tool & Supply Co., Tulsa, has moved from 222 East Brady Street to the nineteenth floor of the Philtower Building.

LUCEY DRAW WORKS HANDLES LONG STRINGS OF PIPE



The new Lucey B-1,700 extra heavy three-speed roller bearing draw works is designed for deepest fields where long strings of pipe must be handled, and it has distinctive features. The drum center and shaft are of patented construction. The drum center is cast around the forged steel shaft in such a manner that the two units form practically a one-piece unit. No keys or bolts are used, and it is impossible for the drum center to work loose on the shaft. The 8-inch diameter shaft is fitted with Timken heavy-duty roller bearings, mounted in self-aligning bearing boxes.

Drum flanges are the Lucey patented free expanding type, improved. An inner annular rib is machined to fit snugly against the face of the drum flange. This rib, together with a companion rib at the outer face of the drum flange, forms a trough for holding water when it is desired to cool brakes by water. This construction also greatly increases the strength of the brake rim. The drum flanges are reinforced by a heavy support collar which is keyed into a recess in the shaft, and which fits against the outside hub of the flange, thus eliminating the spreading of flanges during bailing operations.

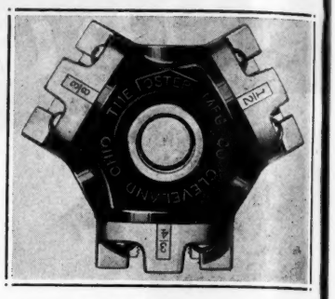
All sprockets and clutches are of Lucelloy special analysis steel, reducing the likelihood of trouble at these points. The brake mechanism is of advanced design, affording a fuller contact with the brake band, and it is more efficient than that of any previous Lucey draw works. The braking mechanism is constructed so that the resultant of the force applied to the brake lever is a pressure that tends to wrap the brake bands around the brake drum. The new brake is simple to adjust, as it is necessary only to tighten or loosen adjusting nuts. This braking mechanism is an exclusive Lucey feature for which patents are pending.

A spacer template is provided by means of which the derrick sill may be accurately drilled to receive the posts. The posts are mounted on this template, which is made of heavy angle iron and acts as a lower tie which rigidly aligns the posts. A top tie plate which is bolted to the front face of the posts at their upper extremity rigidly aligns and ties posts together. A floor plate fitting snugly between numbers one and two posts carries the clutch shifting and braking mechanisms.

The forged steel line shaft is 7 inches in diameter and fitted with double Lucelloy steel cathead. The post guards are equipped with SKF self-aligning ball bearings, which insures against the binding of the roller.

THREE-WAY THREADER WORKS CLOSE TO WALL

A new three-way threader for three-eighths-inch, one-half-inch and three-quarters-inch pipe that will put a standard length thread on a pipe as close as 4⅝ inches to the wall has just been



announced by the Oster Manufacturing Co. and the Williams Tool Corp.

This new threader, called the No. 000 Chip Chaser, uses the same open-type die-holders as the regular chip chasers, allowing a large area for oiling the chip clearance. The manufacturer states that the tool is evenly balanced and cuts a perfect thread on any one of the three sizes.

The No. 000 is small and light in weight and is equipped with a large size three-quarters-inch handle that is said to be exceptionally comfortable for the operator.

CONTROL DEVICES CLASSIFIED

To simplify the classification of control equipment required in various fields to meet wide ranges of pressure, engineers of the Regan Forge & Engineering Co., San Pedro, Calif., has divided it into three classes. Type A is for normal pressures, Type B for medium pressures tested to 3,000 pounds, and Type C for high pressures tested to 6,000 pounds. In the higher pressure classifications the flanges, spools, couplings and tubing heads are much heavier in weight. The Type A equipment is built to withstand pressures corresponding to the respective sizes of A.P.I. casing and tubing. Facilities are provided by the manufacturer for testing this extra heavy equipment in completely assembled form, including christmas tree and valves. A recent development in meeting the extra high pressures with Regan equipment is noted in the adoption of special hydraulic packing. No packing clamps are required with the Regan flanges. Hydraulic packing is used, backed up by a slightly raised annular ring which gives a metal-to-metal contact after the packing is compressed, utilizing the load of the suspended casing plus the thrust applied by the flange bolts, which effects a tight seal between the flanges. The addition of this annular metal ring behind the packing adds an additional factor of safety against fires, according to Regan engineers. A new bulletin, No. 50, has been issued by Regan describing the various classifications of casing control equipment.

FOG EXTINGUISHES FIRES

A booklet explaining a method for prevention and control of fires by using water in the form of fog has been issued by the Rapid Construction Co., 5631 South Riverside Drive, Los Angeles. It is asserted that by conversion of water into millions of fine fog particles the most vicious fire can be extinguished in a few seconds at derricks, tanks, refineries, etc.

...ACROSS THE PLAINS and Over the River!

THE TRUMAN-SMITH Construction Company has laid miles and miles of pipe across plains and over rivers. It has not always been easy going though. Often it has been across rocky country, under rivers and up and over hills under extremely bad weather conditions.

. . . . but the results have been the same. Pipe laid on time, in first class leak-proof condition.

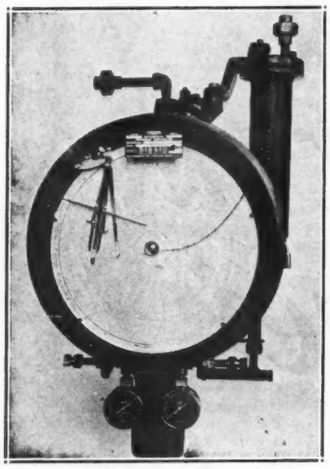
The TRUMAN-SMITH CONST. Co.

EL DORADO, KANSAS.

EQUIPMENT AND SUPPLIES

NEW DEVICE MEASURES WIDELY VARYING FLOW

Satisfactory measurement of widely varying flow has always been a troublesome problem, particularly to the natural gas industry. The Foxboro Co. of Foxboro, Mass., has perfected a differential limit recorder-controller which when working with the Foxboro gas meter will



meter flow that is varying over so wide a range that even a wide range meter will not allow satisfactory readings.

Once installed, the differential limit controller continually gives a record of the gas flow through the line. This controller is known as the primary meter. It is specified to handle the minimum rate of flow with commercial accuracy. When the differential range is exceeded, the control functions and automatically opens a valve which puts the secondary meter in operation. This secondary meter is a complete Foxboro gas flow meter operating in the by-pass. When the secondary meter goes into operation it doubles the effective capacity of the setup.

As soon as the secondary meter line is open the differential pressure drops, because of the increased capacity. The valve in the secondary meter line is held open by the controller until the flow is again within the capacity of the primary meter. The valve is then closed automatically and the primary meter again assumes the entire load. The operation is automatic from start to finish.

Positive and flexible control is obtained by the fact that the points at which the secondary meter is to be cut in and out of the line can be set at will. Positive action and tight closing of the controlled valve are insured by having it operated by the gas line pressure or an auxiliary air supply of 15 pounds per square inch. Single meters or wide range meters or more than one by-pass may be installed in various combinations with the new differential limit controller to meter all cases of varying flow.

LARGE WESTINGHOUSE ORDER

The Westinghouse Electric & Manufacturing Co. has received an order for 20 synchronous motors and control equipment to drive pumps in booster stations to be installed on the Texas-Empire oil pipe line between Sand Springs, Okla., and Chicago. Eighteen motors each rated 800 horse power, 1,800 R.p.m., will be installed in six stations, three units in each station, one unit being a spare. The motors will drive centrifugal pumps. One station will consist of two triplex pumps driven by 450 horse power, 450 R.p.m. synchronous motors.

BUSINESS NOTES

C. W. Matheny, former manager of the Oil Well Supply Co. in Beaumont, Tex., has been transferred to San Antonio, where he will be in charge of the Southwest Texas district. Included in his new district are stores in a dozen fields, including Lockhart, Refugio, Luling, Darst Creek and Bruner.

The Bastian-Blessing Co., Chicago, has announced its new Rego Red Star duplex two-stage regulator for welding and cutting.

Peter F. Steinmetz has been appointed advertising manager of Emsco Derrick & Equipment Co., Los Angeles, Calif. Formerly he was assistant advertising manager in charge of advertising and the price department of the D. & B. division of that company.

The Prest-O-Lite Co., Inc., 30 East Forty-second Street, New York, has opened a new plant for the manufacture of dissolved acetylene at 1240 Stewart Avenue, S.W., Atlanta, Ga. The old plant in Atlanta will discontinue operations.

The Ash Grove Lime & Portland Cement Co. has moved its general offices in Kansas City, Mo., to the Fairfax Building, 101 West Eleventh Street, where it occupies the entire eleventh floor.

John G. Benedict, treasurer and general manager of the Landis Machine Co., Waynesboro, Pa., manufacturers of thread cutting machinery, has been elected a trustee of the Pennsylvania State College.

The Wagner Electric Corp., St. Louis, Mo., has appointed H. W. Petty as branch sales manager for Pittsburgh territory with offices in Pittsburgh.

Additions to plant and equipment, which will increase the production of Tube-Turns, Inc., Louisville, Ky., 60 per cent, are announced by Walter H. Girdler, president of the Girdler Corp., which operates the Tube-Turns company. Tube-turns are seamless forged, short-radius, uniform wall fittings for pipe welding.

The Hercules Motors Corp., Canton, Ohio, has appointed the Automotive Products Co., 3 Berners Street, London W 1, sole distributor for Great Britain and Continental Europe, exclusive of Russia, of Hercules engines and power units.

G. T. Rockenbaugh, representing the Beaumont Iron Works Co., manufacturer of Dreadnaught drilling and pumping equipment, Beaumont, Tex., has moved to Tulsa from Fort Worth, Tex.

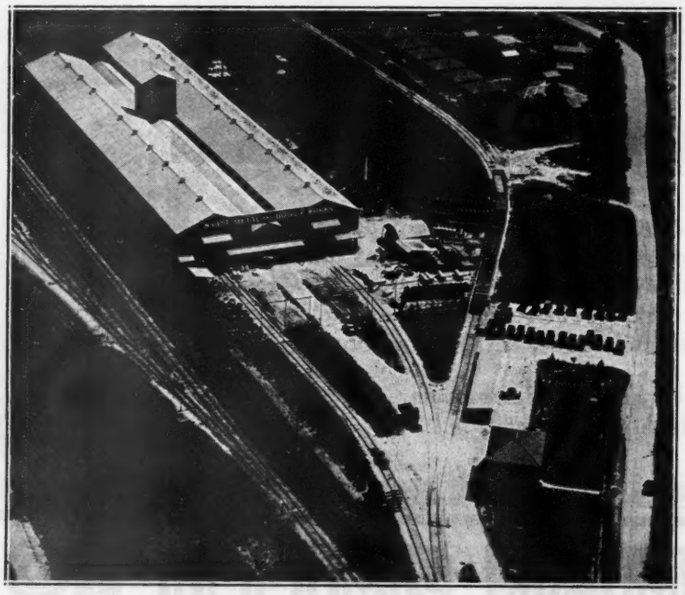
Vice President Cummings C. Chesney, chairman of the manufacturing committee of the General Electric Co., has been relieved at his own request and is succeeded by Vice President William R. Burrows.

The Brust Tool Manufacturing Co., El Dorado, Ark., has appointed Harry B. Shine, Houston, Tex., as its representative in the Gulf Coast territory and has established headquarters at Shines' sales agency. Full stocks of Brust equipment, including the Friend tubing bleeder and the double-string perforator, are carried.

The Republic Supply Co., Houston, Tex., has opened new stores in Hobbs, N. Mex., and Pettus, Tex.

The Hughes Tool Co. is erecting a $150,000 tool plant in Midland, Tex., and will hire about 75 men when manufacturing of oil machinery is commenced, September 1. The shops in Midland are to supply West Texas and eastern New Mexico. R. E. Kimsey, general manager in this area, has already moved to Midland.

AERIAL VIEW OF WYATT METAL AND BOILER WORKS



The new plant of the Wyatt Metal & Boiler Works in Houston, Tex., under the management of Walter B. Van Wart, is now in full operation. The company manufactures refinery equipment ranging in size from one-quarter inch to 1½-inch plate thickness. It is making for one of the Gulf Coast refineries vessels weighing 75 to 100 tons. Toncan metal culverts and underground storage tanks are made at this plant also.

DANGER IS ELIMINATED BY STATIC-PROOF BELT

By Roy C. Moore
Chief Engineer, Charles A. Schieren Co.

Static electricity is a constant source of danger in certain industries, especially where manufacturing operations are carried on in the presence of fumes and gases which form a hazardous combination. Generation of static electricity on belt drives is caused by the creeping of the belt on the pulleys. Even though the creep be less than one-half of 1 per cent it is sufficient to generate charges under favorable conditions.

In damp weather the belt drive generally does not generate large enough charges to cause sparks to jump, owing to the fact that when the fibers of the leather belt are moist the belt is a fairly

good conductor and will lead the charges off to the pulleys about as fast as they are generated. On the other hand, a well dried out belt is a good insulator and as the charge collects on the outer surface it continues to build up until it reaches the proportions of a spark and jumps to the nearest grounded object.

One among the many means adapted for eliminating static charges has been to hang wire gauze over a belt, allowing it to drag on the slack strand, and then grounding the wire gauze. This has not been satisfactory because the collectors have been too often neglected, get out of order, and fail to ground belts properly.

The Bureau of Chemistry, Department of Agriculture, found that dressing a belt thoroughly with a mixture of lamp black, or carbon, and fish glue imparted a surface that would conduct the charge from the belt to the pulleys. Then by grounding the equipment the charge was led off as fast as it accumulated. While this method has a great deal of merit it requires frequent dressing of the belt.

A permanently static proof belt has been developed in which a row of copper wire stitching along each edge makes contact with the pulleys at all times. In this way static charges which normally collect on the outer surface of the belt are led off through the belt by means of the wire stitching. It is then only necessary to see that the machines are well grounded to avoid any further danger from static charges.

Belting made in this way is permanently static proof and entirely eliminates the hazards of operating belt drives where the generation of static charges was formerly a source of danger.

NEW TUBE-TURNS DISTRIBUTORS

Appointment of six new distributors is announced by Tube-Turns, Inc., Louisville, Ky., manufacturers and marketers of seamless, short radius forged fitttings for pipe welding. The new distributors are the Grinnell Co., Charlotte, N. C., for North and South Carolina and Georgia; Ebbert & Kirkman Co., Inc., Birmingham, Ala., for Alabama; B. Hoffman Manufacturing Co., Milwaukee, Wis., for Milwaukee and adjacent territory; United Pipe & Supply Co., Charleston, W. Va., for Charleston and adjacent territory; Vulcan Copper & Supply Co., Cincinnati, for Cincinnati and adjacent territory, and Hedley & Voisinet, Buffalo, N. Y., for Buffalo and surrounding territory. Each of the new distributors carries complete stocks of Tube-Turns.

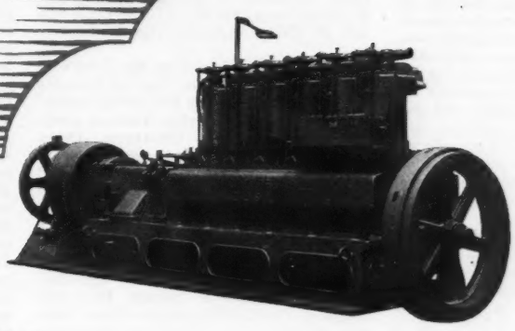
LOW FUEL COST

The Beauty of the **WRIGHT RELIABLE** *Gas-Gasoline Engine*

DRILLING POWER

at 2¢ an hour

Using Gas From His Own Lease



ONE enterprising Contractor* said of his WRIGHT RELIABLE: "We feel safe in saying that it will drill, pull tools, or do anything else as well as steam, and at only a fraction of the cost." He had used his WRIGHT on four wells with a 5,000-lb. string of tools and jars. Using Natural Gas from his own lease, his only expense, he reported, was 1 gallon of lubricating oil every 24 hours—a little over 2c an hour. Water expense was negligible. Using crews unfamiliar with gas drilling engines, he pronounced the WRIGHT "fool proof."

Using gasoline for fuel in the same engine, his fuel consumption was 45 gallons every 24 hours—a fuel cost of approximately 35c an hour. Sounds low? It is. But that's the way WRIGHT RELIABLE Drilling Engines operate!

*C. E. DAUGHERTY & CO.
Contractors and Producers
Owensboro, Kentucky

Manufactured by

THE WRIGHT MACHINE CO., Inc.
Established 1880
OWENSBORO, KY.

Distributed in the Mid-Continent Field
by the 15 stores of

THE BRIDGEPORT MACHINE CO.
WICHITA, KANS.

Backed by Brideport's
24-Hour Day and Night Service

A WRIGHT RELIABLE
GAS-GASOLINE ENGINE
ON YOUR WELL MEANS
MONEY SAVED EVERY HOUR

CLIP THE COUPON FOR
DESCRIPTION AND PRICES

The Wright Machine Co.
Owensboro,
Kentucky

Gentlemen: Please send me descriptive literature on your WRIGHT RELIABLE gas-gasoline engines. I understand this does not obligate me in any way.

Name _____
Company _____
St. No. _____
City _____ State _____

EQUIPMENT AND SUPPLIES

DEVICE DOUBLE-CHECKS DIRECTION IN DRILLING

The Syfo clinograph represents a radical change in design and method of operation of inclination measuring instruments, with which reliable and permanent records are obtained without the use of acids. The principal characteristic is the use of the syphonic action for transferring the recording fluid from the delivery to the recording and from the recording to the receiving chamber, while making an inclination record. Operation of the device is simple, the results obtained are accurate and can be read directly without computations, and the records are made on paper which can be filed for reference purposes. Syfo is ruggedly built of metal.

The time required for making a test is short. Drilling is suspended only during the making of the test, as Syfo will run inside a 4-inch drill stem and tool joints. It is either let down on a wire line or can be dropped into the hole by the go-devil method prior to pulling out the drill stem. Daily use will indicate any deviation of the bore hole and thereby help the driller to make corrections.

After inserting the recording paper in the recording chamber and after selecting the proper size orifice (according to the depth at which the inclination is to be recorded), the orifice chamber is filled with the recording liquid, which slowly discharges through the orifice into the delivery chamber, filling it gradually until the upper bend of the syphon is reached. At this moment the liquid immediately overflows into the recording chamber, gradually rising until the upper bend of the syphon is reached, when again the liquid overflows through the syphon into the receiving chamber. While passing through the recording chamber the liquid leaves an impression in color on the recording paper showing exactly the relation of the surface of the liquid to the vertical axis of the brass column at the depth at which the test is made.

When removing the recording paper and opening it out flat, the top border of the liquid stain on the paper represents a wavy curve. A horizontal tangent to the lowest and highest point of this curve is drawn, or a recording sheet is laid across the high point. The vertical distance between the high and low points of the curve measured by the scale printed on top of the recording paper indicates directly the angle of vertical inclination. The Syfo clinograph is manufactured by the Sperry-Sun Well Surveying Co., Philadelphia, Pa. Branch offices are maintained in Dallas, Tex., and Tulsa. The instrument is not sold, but is leased.

The Emsco Asbestos Co., Downey, Calif., is mailing a catalog devoted to automatic products, including brake-lining, brakeshoe liners, clutch facings, sheet packing, valve stem packing, wick packing, packing rings, radiator hose, tubular couplings, etc.

TRADE LITERATURE RECEIVED

A series of bulletins issued by the F. E. Myers & Brother Co., Ashland, Ohio, presents installation suggestions and varied information regarding Myers self-oiling water systems and power pumps.

A new pamphlet on oil well surveying entitled "Straight From the Grass Roots Down" has been published by Celco Oil Well Survey, Inc., 412 West Sixth Street, Los Angeles. The pamphlet explains the Celco inclinometer (an acid-bottle type deviation recording device), the Celco sub and the Celco angle deviation recorder.

A new catalog issued by the Continental Equipment Co., Los Angeles, features the Continental air-gas lift turbine pump, an improved flow device. Various methods of hook-up are illustrated. Other products described include the Continental slush pump piston, rods, valves and Castro belt dressing.

The uses of Champion all-steel rotary hose and Nickeladuim steel hose accessories are covered in a handsomely bound 8-page bulletin issued by the manufacturers, Champion & Barber, Inc., Los Angeles, Calif. Photographs show how this all-steel rotary hose works in actual service.

The Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa., has published two new folders dealing with electrification for cable tool drilling and for pipe line pumping respectively. These folders present the advantages of electrification for drilling and for pumping, and contain photographs showing electric motors and control apparatus used for these purposes.

An attractive eight-page circular issued by the Trackson Co., Milwaukee, Wis., describes the new Trackson crawler wheels, built for mounting on various makes of wagons, bummers, etc.

The Bigelow-Liptak Corp., Detroit, Mich., has issued a new catalog devoted to the Liptak double suspension arches for furnaces, which the manufacturers say increase arch efficiency and reduce arch maintenance costs.

FABRICATED WOOD DERRICKS

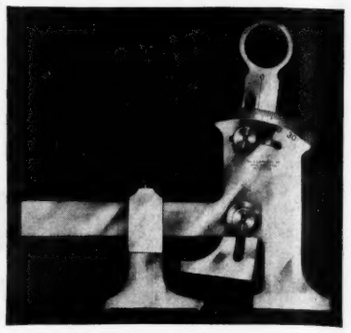
The practicability of fabricating wood oil derricks in a retail lumber yard and delivering them to the job ready for erection was demonstrated in building the 136-foot fabricated all-nailed Douglas fir derrick set up by the West Coast Lumbermen's Association at the Oil Equipment and Engineering Exposition held recently in Los Angeles, Calif. The lumber was cut to detail in several Los Angeles retail yards, and cost figures thus were derived to enable quoting on a completely cut derrick thereafter. The 136-foot derrick was built from designs prepared by engineers of the National Lumber Manufacturers Association and presented to the American Petroleum Institute as embodying tentative standards. The design was developed to meet the requirements of heavy-duty deep drilling and allows for a safe load of 756,000 pounds, using a common structural grade of Douglas fir. It is capable of withstanding a 70-mile wind. The National Lumber Manufacturers Association has issued a booklet, "Lumber for Oil Industry Purposes." The wood derrick, the bulletin says, offers low initial cost, low maintenance cost, ready availability of material and reduced wear and tear on rig equipment.

LINK-BELT PILLOW BLOCK

The Link-Belt Co., Chicago, is just announcing its Timken antifriction ball and socket pillow block. Designed several years ago, it has been perfected in the meantime, and has been tested in practically every type of service. This is Link-Belt's method of developing a product to a high point of perfection before announcing it to the trade. These pillow blocks are designed to fit any good grade of commercial shafting, from $1\frac{7}{16}$-inch diameter to the largest size without special fittings or the use of appliances. As they use pressure lubrication, they are practically dust tight. The grease is forced in at the center and out at the shaft openings, thus, with the addition of the grease seal at the top, dust and grit are kept out of the bearing. The grease stays inside the bearing where it belongs.

GAUGE FOR CUTTERS IS ANNOUNCED BY STARRETT

A cutter clearance gauge, designed for the determination of clearances on milling cutters, has been developed by the L. S. Starrett Co., Athol, Mass. Starrett cutter clearance gauge No. 459 gives precise readings, in degrees, on all types of cutters from 2 inches to 30 inches and more in diameter. It is adaptable to



end, side, helix, spiral or inserted-tooth cutters with equal accuracy. In addition, it helps materially in checking clearance on many special types of cutters.

The gauge consists of a tool steel beam, fitted with one stationary foot with its contact edge parallel with the beam; a slidably mounted foot, its edge also parallel with the beam, and an upright blade which is adjustable both perpendicularly and angularly. The upright blade is graduated in degrees from 0 to 30.

Three simple adjustments are required for the reading. Measuring side clearance on large diameter, coarse pitch cutters is a simple operation because the contact edge of the sliding foot is in line with the edge of the stationary foot. The perpendicular and angular adjustments of the upright blade are independent of each other, allowing easy and precise determinations. An advantage credited to the new gauge is the fact that it can be applied without disturbing the cutter. It is unnecessary to remove the cutter from its arbor on grinding or milling machine.

PIPE LINE WELDERS FIND "CATERPILLAR" 60 USEFUL

The "Caterpillar" 60, equipped with side beam and winch, is being used here to hold the pipe in place for welding on a line under construction by the Standard Oil Co. of California. The picture was taken near Martinez, Calif.

REPUBLIC SALES CHANGES

Executive sales appointments in the new Republic Steel Corp. are announced by H. T. Gilbert, vice president in charge of sales, as follows: A. E. Walker, former general sales manager of the Republic Iron & Steel Co., becomes assistant vice president. J. M. Schlendorf, formerly vice president in charge of sales of the Central Alloy Steel Co., will assume the duties of sales manager of Alloy Steel products. Norman Foy, Birmingham district manager in the old Republic organization, becomes sales manager of mild steel products with headquarters in Youngstown, Ohio. Co-ordination of the various sales units is proceeding rapidly, according to Mr. Gilbert.

LUKENS STEEL CO. EXPANDS

Robert W. Wolcott, president of the Lukens Steel Co., Coatesville, Pa., announces this company was entering the field of supplying welded steel construction to the manufacturers of machinery and equipment. Approximately 50,000 square feet of manufacturing space has been provided at the Coatesville plant for this activity. Operations will be carried on through a subsidiary, Lukenweld, Inc., which for the present will utilize some of the manufacturing facilities of the parent company. G. D. Spackman is president of Lukenweld, Inc.

EQUIPMENT AND SUPPLIES

INSTALLATION AFFORDS CENTRALIZED CONTROL

A Diesel electric drive outfit now in use in a drilling job in Baldwin Hills, near Culver City, Los Angeles County, California, is based on the solid injection, full Diesel principle which utilizes crude oil of proper gravity and heat unit value. Besides the regular rotary drilling outfit the equipment includes two 200-horsepower Atlas Imperial 6-cylinder, 4-cycle, full Diesel engines, connected by Vulco rope drive to two 125 k.w. direct-current generators. The generators are wired through a switching panel to a 250-horsepower, D.C. motor, direct-connected to reduction gear, chain-connected in turn to the drawworks. A 125-horsepower, D.C. motor is Texrope connected to a 6x16" power-driven mud pump. There are the usual recording meter, indicating meters, lights etc.

A feature is the adaptation of the Ward-Leonard control system for direct current which is based on control through the variation of voltage. This system results in a centralized control of flexibility and permits both the drilling motor and pump motor to be controlled from a single throttle wheel. Other equipment such as drawworks and rotary table are of standard types.

An advantage of this type of installation is that several well locations may be drilled without moving the engines and generators, it being only necessary to stretch the wires to each new location. The advantage of low fuel consumption characteristic of Diesel engines is important in the drilling of wildcat wells in areas where fuel and water are not easily available. Each drilling installation may be regarded as a self-contained, self-sustained plant. Upon completion of the well, all of the equipment may be salvaged.

These Diesel engines are manufactured by the Atlas Imperial Diesel Engine Co., of Oakland, Calif., and distributed by Buck & Stoddard, Inc., Los Angeles, Calif.

BELT FASTENER REPRINT

Reprints of American Petroleum Institute Standardization Bulletin No. 104, presenting "Belt Fastener Report for 1929," by Glenn H. Bowlus, General Petroleum Corp. of California, Los Angeles, Calif., have been mailed to members of the institute's division of production committee on standardization of oil field belting. The reprint contains a summary of the work of the committee on this subject, with suggestions for improved practice. It is desired to place a copy in the hands of every field man directly responsible for the care and maintenance of oil-field belting. With each copy is an A.P.I. belt service record form and a request for information on all types of fasteners. Data especially are sought regarding troubles encountered, such as bolt breakage, etc., and how difficulties were overcome. Mr. Bowlus is prepared to assist in overcoming field difficulties upon receipt of such information. Extra copies of the reprint are available from Mr. Bowlus at 2525 East Thirty-seventh Street, Los Angeles, Calif. Copies of the belt service record form may be obtained from the Dallas office of the institute, 1508 Kirby Building.

Appointment of H. V. Chase as assistant director of operations in the explosives department of the Hercules Powder Co., Wilmington, Del., is announced by C. A. Bigelow, general manager of the department. W. S. Brimijoin has been appointed superintendent of the Kenvil plant to succeed Mr. Chase.

READING STEEL CASTING CO. IN LARGER QUARTERS

The Reading Steel Casting Co., which for the last two and one-half years had its quarters at 1505 Live Oak Street, Houston, Tex., has moved into a larger and more modern building at 905 Live Oak Street. Sharing the warehouse with Reading and carrying complete stocks are the Page Steel & Wire Co., American Cable Co., Inc., and Hazard Wire Rope Co. The warehouse is convenient and easily accessible.

NEW MODELS ANNOUNCED BY RELAY MOTORS CORP.

Relay Motors Corp., Lima, Ohio, announces two new six-wheel models of the two-wheel drive type, in which the relay pendulum suspension has been incorporated on all four of the rear wheels. A basic feature of the relay suspension is the fact that the upward swing of the load automatically increases the downward pressure on the wheels, greatly adding to the traction.

The engine on both these models is a six-cylinder, removable L head type. The 50SW engine has a bore of 3¾ inches, and a stroke of 5 inches. The 60SW engine has a bore of 4⅛ inches and a stroke of 5⅛ inches. Three point suspension and force-feed lubrication to all crankshaft, camshaft, and connecting-rod bearings are offered in both models. The 50SW engine has an S.A.E. rating of 33.75 horsepower and the 60SW has an S.A.E. rating of 40.8 horsepower. There are 456 square inches of driving surface on the multiple dry disc clutch of the 60SW. The 50SW has a driving surface of 336 square inches.

The Relay six-wheeler uses a single spring on both rear axles, only one end of which is directly connected to the frame by means of a spring shackle. The other end is attached to the trailed axle by means of an oscillating rocker arm construction which permits it to work as a cantilever spring.

H. H. Clark, vice president and sales manager of the Baash-Ross Tool Co., Los Angeles, Calif., announces the appointment of E. S. Self and R. C. Adams to the sales organization.

ALL WEARING PARTS OF SPROCKET IN OIL BATH

In the new oil bath rotary and transmission sprocket manufactured by the M. W. C. Well Equipment, Beaumont, Tex., all wearing parts run in a bath of oil. The master wheel revolves on a roller bearing axis and the weight of the pipe rests on the base instead of on the master wheel and bearings. The pipe is screwed and unscrewed above the rotary without rotating the pipe in the hole when breaking out. The transmission is set to unscrew with the engine or motor in forward motion. The drive pinion has bearings on both sides to maintain correct alignment of the pinion and the master wheel teeth and to eliminate noise and vibration. Monroe W. Carroll is the patentee of the sprocket.

CONSOLIDATION PLANS MADE

George M. Verity, chairman, and Charles R. Hook, president, of the American Rolling Mill Co., and W. L. Allen, president of the Sheffield Steel Corp., announce that the directors of these two organizations have concluded negotiations for combining the interests of the two companies. The consolidation will add to the products of the American Rolling Mill Co. merchant bars, billet and rail steel reinforcing bars, bolts, nuts, rivets, spikes, tie plates, oil field and railroad forgings and bar iron, barbed wire and nails, and will give the company immediate production in Kansas City of blue annealed sheets. Sheffield already has two blue annealed jobbing mills in operation with a range of sizes up to 72 inches in width.

LOOKS AS THOUGH THEY MEANT TO COVER THE GROUND

Here is part of the fleet of new Ford coupes recently purchased by the Emsco Derrick & Equipment Co. for use in the Mid-Continent Field. The picture, taken in front of the Dallas, Tex., store of the company, shows, left to right: L. C. Scott, L. R. McCollum, J. W. Finn, C. E. Scott, H. H. Rank, W. G. Fitzpatrick, Jack Long.

SCIENTIFIC SEPARATOR AND SCRUBBER OFFERED

The Universal oil and gas separator, horizontal type, made by the Hydrocarbon Apparatus, Inc., Los Angeles, Calif., is said by the manufacturer to embody in its design every physical law to effect maximum and efficient separation—linear deflection, contraction-expansion, momentum, elasticity, centrifugal flow capillary entrainment and wiping. It is declared to assure clean gas for pipe lines, gas-free oil to the tanks, large oil and gas capacity, absence of back pressure, perfect automatic valve control and large oil surface for gas release. It will handle either hot or cold oil and is called by the manufacturer "the scientific scrubber and separator."

The oil and gas from the well enter the separator at one end and pass into a tubular slotted screen, from which the oil runs in sheets into the main body of oil. The screen has a heavy wearing plate on the end, which can be renewed when desired. This sheeting of the oil gives an opportunity for much entrained gas to leave it. The main body of the oil gives a large surface, both in length and breadth, for any foam to settle, and gives a large gas release area without any turbulence or ebullition. Any sand or foreign matter is removed by an outlet at the bottom of the separator. The oil outlet is controlled by a Universal pilot quick-opening valve, which is actuated by a float. This valve gives sensitive operation, the oil passing into a valve and out of the separator to the stock tanks.

The gas passes into gas scrubbing chamber, where it is thoroughly scrubbed by two sets of screens, each set having four screens which are graduated from coarse to fine. There is a space between each two sets of screens which is really an expansion chamber. This gives the gas which has been divided into many fine streams time to reassociate before being again divided by the second set of screens. The gas then passes into a third expansion chamber and out of the separator, having been thoroughly scrubbed and free from any entrained oil, water and dirt.

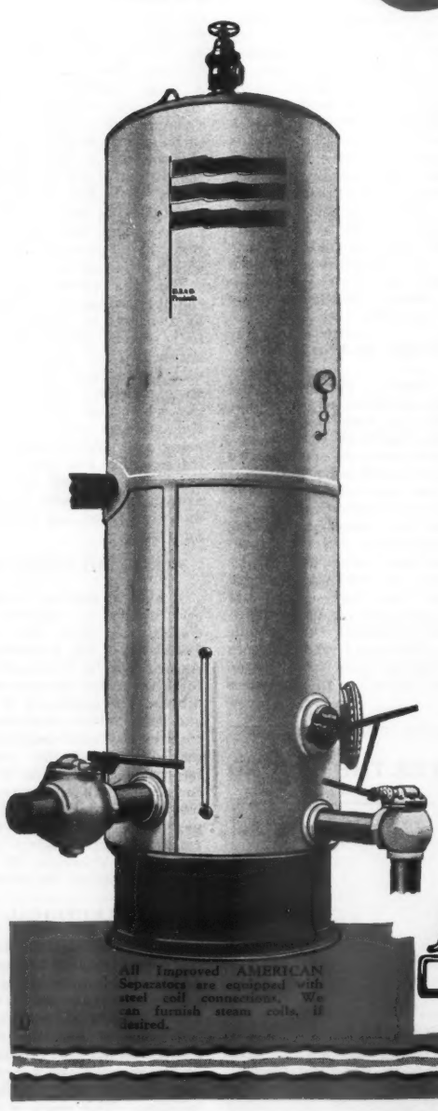
STEEL FOUNDERS OPTIMISTIC

A general meeting of the Steel Founders Society of America, Inc., held in conjunction with the convention and exhibition of the American Foundrymen's Association in Cleveland, Ohio, brought forth favorable comment on business conditions. The sentiment of executives present from steel foundries over all the country indicated confidence that the second quarter of this year would show improvement over the first and that in the second half of the year good business would materialize. Operations, as reported by members of the society, are running approximately 76 per cent of capacity; shipments, 79 per cent of capacity; bookings, 76 per cent of capacity.

U. S. ELECTRICAL ENLARGES

For the third time within 12 months the manufacturing headquarters of U. S. Electrical Manufacturing Co. in Los Angeles, Calif., are being enlarged, adding approximately 25 per cent area. About four months ago the factory was increased 50 per cent in size by the addition of a side wing and a new manufacturing unit in the rear of the main factory building. This space is being augmented by the addition of a west wing, providing new manufacturing facilities and increasing administration headquarters approximately 100 per cent. The company specializes in the production of asbestos-protected AutoStart motors ranging up to 150 horsepower.

Crack the Whip!



All Improved AMERICAN Separators are equipped with steel coil connections. We can furnish steam coils, if desired.

A Principle of the Improved *American* Oil & Gas *Separator*

EQUIPPED WITH B.S.& B. SPRAY CONDENSER

AS the flow comes from the well, when the Improved AMERICAN Oil and Gas Separator is used, it enters through the Inside Tangential Inlet, taking full advantage, without any impairment, of the principle of centrifugal force. The engineers who designed this Improved AMERICAN Separator were not satisfied with just this, for the gas that is removed is still wet and valuable globules of oil remain in suspension in the on-rushing gas.

So the B. S. & B. Spray Condenser was devised! The on-rushing gas, in its endeavors to escape, is forced through this condenser in a way that is similar to the principle of "Crack-the-Whip." You know how the last boy is whirled about!

The gas is whipped through a series of passages in such a way that absolutely every particle of oil is thrown out of it! Thus 100% dry gas!

"See American First!"

BECAUSE of the results of using the Improved AMERICAN Oil and Gas Separator, give consideration and see a demonstration, if possible, of this separator before purchasing. Learn more about the Tangential Inlet, and the B. S. & B. Spray Condenser. Learn about the Inside Oversize Float that has a capacity of ten of the ordinary Outside Floats. Learn how the operation of this separator may be controlled in accordance with the volume, pressure, sand and low temperature conditions. There are so many points in its favor.

It will pay you to investigate fully the Improved AMERICAN. See this AMERICAN in action!

May we send complete information—or, better still, a representative? Please address Dept. BA-3.

AMERICAN
OIL FIELD EQUIPMENT
Always Dependable

American Tank Co.

A SUBSIDIARY OF
BLACK, SIVALLS, & BRYSON, Inc.
BARTLESVILLE, OKLAHOMA

B.S.&B. Products

OKLAHOMA CITY, OKLAHOMA

LOUISIANA-ARKANSAS PROVEN AREAS

(Continued from Page 47)

E, NW cor. SW NE, Sec. 26-23-12.....Cmtd. 8⅛-in. 2,928 ft; 1-ft. sand 2,940 ft.

Nat. Drlg. & Prod. Co.'s (was Lide et al's) No. 1 Matlock, 2970 ft. S, 990 ft. E, NW cor., Sec. 26-23-12....Tested S.W. 3,181 ft; arranging to plug back and perforate csg. at 2,968 ft.

Nat. Gas Prod. Co.'s No. 3 U. S. Govt., 1,520 ft. S, 2,580 ft. E, NW cor., Sec. 31-23-11.....Fishing D.S; T.D. 3,160 ft.

Palmer Corp.'s No. 2 Roberson, 330 ft. N, 330 ft. E, SW cor. NW NE, Sec. 26-23-12.....Derrick.

The Texas Co.'s No. 1 Peyton, 660 ft. N, 330 ft. E, SW cor., Sec. 30-23-11.....Cmtd. 4½-in. 3,133 ft; T.D. 3,163 ft.

The Texas Co.'s No. 1 Hy Rose, 940 ft. E, 450 ft. N, C, Sec. 31-23-11.....O.W.D.D; waiting on rig; T.D. 2,680 ft.

The Texas Co.'s No. 4 Hy Rose, 1,000 ft. N, 330 ft. E, C, Sec. 31-23-11.....Drlg. shale 3,010 ft.

The Texas Co.'s No. 10 Wilkinson, 250 ft. N, 330 ft. W. SE cor. NE, Sec. 36-23-12.....Sand 3,144-56 ft; cmtd. 6-in. 3,132 ft; T.D. 3,162 ft.

The Texas Co.'s No. 11 Wilkinson, 990 ft. W, 230 ft. N, SE cor. NE, Sec. 36-23-12.....W.O.S.R; T.D. 3,160 ft.

The Texas Co.'s No. 12 Wilkinson, 990 ft. W, 330 ft. S, NE cor., Sec. 36-23-12.....Began drlg. July 1; drlg. 206 ft.

The Texas Co.'s No. 13 Wilkinson, 330 ft. S, 330 ft. W, NE cor., Sec. 36-23-12.....Derrick.

Tippett Drlg. Co.'s No. 3 Holmes, 330 ft. N, 330 ft. E, SW cor. NE NW, Sec. 36-23-12.....300 ft. oil in hole; waiting on power; T.D. 3,180 ft.

Woodley et al's No. 1 Roberson, 330 ft. N, 330 ft. W, SE cor. SW NE, Sec. 22-23-12.....Surface csg. collapsed; W.O; T.D 1,700 ft.

BOSSIER PARISH—ELM GROVE

Jones Chemical Co.'s No. 4 fee, 495 ft. N, 30 ft. E, SW cor. SE, Sec. 30-16-11.....Derrick.

BOSSIER PARISH—SLIGO

La. G. & F. Co.'s No. 7 Thigpen & Herold, 660 ft. N, 660 ft. E, SW cor., Sec. 19-17-11.....Began drlg. June 26; cmtd. 10-in. 295 ft; D.S, test 868 ft; show oil and gas; drlg. 1,043 ft.

Woodley Pet. Co.'s No. 1 Schuler, 660 ft. N, 660 ft. E, SW cor. NW, Sec. 13-17-12.....Began drlg. June 26; cmtd. 10-in. 127 ft; drlg. 962 ft.

CADDO PARISH—GREENWOOD

Calatex O. & G. Co.'s No. 1 Edgar, 1,460 ft. S, 1,900 ft. E, NW cor., Sec. 17-16-16.....Location.

Calatex O. & G. Co.'s No. 1 McAnn-Alfred, 1,810 ft. S. 970 ft. E, NW cor., Sec. 17-16-16.....Location.

Calatex O. & G. Co.'s No. 1 Hudson, 2,395 ft. N, 660 ft. E, SW cor., Sec. 8-16-16.....Location.

Calatex O. & G. Co.'s No. 2 Taylor-Trosper, 45 ft. N, 1,220 ft. E, SW cor., Sec. 8-16-16.....Derrick.

CADDO PARISH—MOORINGSPORT

Falcon Oil Co.'s No. 1 Miller, 1,020 ft. N, 1,320 ft. E, SW cor., Sec. 29-20-15.....Location.

Falcon Oil Co.'s No. 4 Muslow, 200 ft. W, 1,270 ft. S, NE cor., Sec. 29-20-15.....Location.

Falcon Oil Co.'s No. 4 Nunnally, 3,004 ft. N, 3,150 ft. E. SW cor., Sec. 29-20-15.....Began drlg. June 10; cmtd. 10-in. 80 ft; 6-in. 2,026 ft; drlg. 2,252 ft.

Gulf. Ref. Co.'s No. 1 Leonard fee, 3,623 ft. N, 2,486 ft. E, SW cor., Sec. 29-20-15.....Rig up.

Gulf Ref. Co.'s No. 4 Nunnally, Sec. 29-20-15.....Old T.D. 2,356 ft; W.O.S.R. 2,365 ft.

L. A. Wanen's No. 1 Barr Heirs, 1,851 ft. E, 67 ft. S. NW cor., Sec. 32-20-15.....Cmtd. 6-in. 2,000 ft; testing 2,250 ft.

CADDO PARISH—OIL CITY

P. T. Mize's No. 2-A La. Oil Ref. Corp., 200 ft. N, 200 ft. E. SW cor., Sec. 6-20-15.....Drlg. gumbo 1,120 ft.

The Texas Co.'s No. 73 Levee Board, 1,642 ft. E, 780 ft. N, SW cor. SW SE, Sec. 27-21-16.....Location.

DE SOTO PARISH—HOLLY

Ark. Fuel Oil Co.'s No. 2 Scott, 330 ft. N, 330 ft. E, SW cor. SE NE, Sec. 32-14-13.....Swbd. 35 bbls. oil, 20 bbls. S.W. 2,781 ft; W.O.S.R. 2,790 ft.

W. C. Clark et al's No. 1 Nabors, NW cor. SE NW, Sec. 17-13-13.....S.D; W.O; sand and shale; no show 2,812 ft.

Lacy Oil Co.'s No. 1 G. W. Sample, 300 ft. S, 300 ft. W, NE cor. NW NE, Sec. 1-13-14.....Fishing D.S; T.D. 2,500 ft.

Standard Oil Co.'s No. 1-D Farmer (was R. O. Roy's), 330 ft. N, 330 ft. E, SW cor. SE, Sec. 32-14-13.....Derrick

LA SALLE PARISH—URANIA

W. O. Clark's No. 1-B Russell, Sec. 25-10-1e.....Coring 1,470 ft.

Montugu Oil Co.'s No. 8 Zenoria Lbr. Co., 710 ft. S, 250 ft. W, NE cor., Sec. 10-9-1e.....Cmtd. 6⅝-in. 1,499 ft; W.O.S.R. 700 ft. oil; 700 ft. S.W; T.D. 1,510 ft.

MOREHOUSE PARISH

Bahan & Bahan's No. 4 Feazel, 900 ft. W, 330 ft. S. NE cor., Sec. 2-20-4.....Location.

J. S. Herkness' No. 12 Bowles, 3,392 ft. E, 3,300 ft. S, NW cor., Sec. 18-20-5.....Drlg. hard lime 3,184 ft.

Industrial Gas Co.'s No. 1 fee, 1,980 ft. S, 660 ft. W, NE cor., Sec. 3-20-4.....Began drlg. May 16; cmtd. 12½-in. 112 ft; 9-in. 848 ft.

La. G. & F. Co.'s No. 1 Archie, 627 ft. S, 1,957 ft. E, NW cor. SW, Sec. 22-20-4.....Location.

La. G. & F. Co.'s No. 26 Crossett, 645 ft. E, 574 ft. S, NW cor. Lot 9, Sec. 33-21-5.....Began drlg. May 16. S.D. high wtr; T.D. 75 ft.

Southern Carbon Co.'s No. 56 fee, 660 ft. S, 660 ft. E, NW cor. NW, Sec. 15-20-4.....Began drlg. July 1.

OUACHITA PARISH

Amalgamated Co.'s No. 1-B Kate Cole, 660 ft. N, 660 ft. E, SW cor. NE SW, Sec. 25-20-4.....Rig up.

Ark.-La. P. L. Co.'s No. 4 McEnery, 1,320 ft. N, 760 ft. E, SW cor., Sec. 29-19-4.....Began drlg. June 26; cmtd. 12½-in. 180 ft; 8-in. 816 ft.

Carbon Consolidated, Inc.'s No. 5 Guthrie (was United Oil & Nat. Gas Co.'s No. 5 Guthrie), 6,634 ft. N, 7,078 ft. W, cor. Secs. 49, 25 and 26, in Sec. 50-20-4 Rig up.

Hope Prod. Co.'s No. 4 Fairbanks, 616 ft. W, 623 ft. S. NE cor., Sec. 36-20-4.....Cmtd. 8-in. 840 ft; drlg. 1,200 ft.

Jordan Drlg. Co.'s No. 7 Cole, 265 ft. S, 1,459 ft. W, NE cor., Sec. 49, in Sec. 50-18-4.....Location

Jordan Drlg. Co.'s No. 1 J. P. Parker, 950 ft. N, 485 ft. W, cor. Secs. 41, 9 and 16, in Sec. 41-18-4.....Location

Jordan Drlg. Co.'s No. 2 Pereboom, 1,207 ft. W, 264 ft. S, C, Sec. 9-18-4.....Rig up.

Jordan Drlg. Co.'s No. 1 School, 216 ft. S, 244 ft. W, NE cor. NW, Sec. 16-18-4.....Location.

La. G. & F. Co.'s No. 3 Breard, S 9° 734 ft., S 81° E 594 ft., NW cor., Sec. 44-18-4.....S.D. high wtr; T.D. 1,300 ft.

Pipes & Mack's No. 1 Union Gas Products Co., Inc., 1,598 ft. W, 297 ft. N, SE cor. SW, Sec. 7-18-5.....Tested dry 2,460 ft; W.O. 2,500 ft.

Pipes & Mack's No. 2 Union Gas Products Co., 296 ft. W, 528 ft. N, SE cor. SW, Sec. 7-18-5.....Location.

United Carbon Co.'s No. 6 Spade, 1,180 ft. S, 140 ft. E, NW cor., Sec. 27-19-4.....Location.

United O. & N. G. Co.'s No. 2 Cole, 660 ft. S, 594 ft. E, C, Sec. 26-20-4.....Derrick.

RICHLAND PARISH

W. C. Feazel's No. 1 R. B. Simon, 2,406 ft. W, 2,020 ft. S, NE cor., Sec. 11-16-6.....Rig up.

Franklin O. & G. Co.'s No. 1 Thompson, 660 ft. N, 165 ft. W, SE cor. NE, Sec. 14-16-6.....Location.

Industrial Gas Co.'s No. 1 Lyles, 1,314 ft. N, 520 ft. E, SW cor., Sec. 23-16-6.....Cmtd. 6-in. 2,300 ft.

International Gas Prod. Co.'s No. 1 Minnie LaGrone, 769 ft. N, 858 ft. E, SW cor., Sec. 7-16-7.....Location.

La. G. & F. Co.'s No. 1-C McCoy, 872 ft. W, 1,749 ft. N, SE cor., Sec. 8-16-6.....Derrick.

Palmer Corp.'s No. 1-B Boykin, 177 ft. S, 787 ft. E, C, Sec. 33-17-6.....Derrick.

Palmer Corp.'s No. 1 Brown, 1,320 ft. S, 659 ft. W, NE cor. NW NE, Sec. 27-16-6.....Location.

Palmer Corp.'s No. 1 Newberry, 3,296 ft. N, 2,640 ft. W, SE cor., Sec. 2-16-6.....Cmtd. 12½-in. 189 ft; 9-in. 922 ft.

Palmer Corp.'s No. 1 N. D. Thomason, 1,320 ft. S, 660 ft. E, NW cor. NW, Sec. 22-16-6.....Drlg. shale and boulders 2,208 ft.

Richland Prod. Co.'s No. 1 Ball, 2,050 ft. S, 1,980 ft. W, NE cor., Sec. 22-16-6.....Cmtd. 6⅝-in. 2,300 ft.

Richland Prod. Co.'s No. 1 Brown, 1,179 ft. S, 792 ft. W, NW cor. NE SE, Sec. 22-16-6.....Began drlg. June 29; cmtd. 12½-in. 201 ft.

Richland Prod. Co.'s No. 1 Hale, 660 ft. S, 660 ft. E, NW cor. NE, Sec. 22-16-6.....Rig up.

Southern Carbon Co.'s No. 1 Hallock, 3,300 ft. N, 760 ft. W, SE cor., Sec. 2-16-6.....Cmtd. 6-in. 2,300 ft.

Southern Carbon Co.'s No. 1-B Hallock, 1,622 ft. N, 990 ft. W, SE cor. NW, Sec. 1-16-6.....Began drlg. June 12; cmtd. 12-in. 185 ft; 8-in. 865 ft.

Southern Carbon Co.'s No. 1 H. H. Hemler, 660 ft. N, 1,435 ft. E, SW cor., Sec. 1-16-6.....Location.

Southern Carbon Co.'s No. 1-B J. H. Hemler, 619 ft. N, 5,024 ft. E. SW cor., Sec. 1-16-6.....Drlg. 2,253 ft.

Southern Carbon Co.'s No. 1-C M. L. McCoy, 1,880 ft. N, 2,871 ft. E, SW cor., Sec. 1-16-6.....Cmtd. 6-in. 2,300 ft.

Southern Carbon Co.'s No. 2-C M. L. McCoy, 1,880 ft. N, 5,024 ft. E, SW cor., Sec. 1-16-6.....Location.

Southern Carbon Co.'s No. 5 F. B. and E. A. Sartor, 1,156 ft. E, 531 ft. S, NW cor. SW, Sec. 19-16-6.....Location.

Southern Carbon Co.'s No. 6 F. B. and E. A. Sartor, 2,640 ft. N, 2,031 ft. W, SE cor., Sec. 24-16-5.....Location.

Southern Carbon Co.'s No. 1-C T. R. Sartor, 660 ft. S, 660 ft. W, NE cor., Sec. 29-16-6.....Cmtd. 8-in. 1,260 ft.

Southern Carbon Co.'s No. 1 H. L. Thomason, 660 ft. N, 660 ft. E, SW cor., Sec. 2-16-6.....Drlg. 1,885 ft.

Southern Carbon Co.'s No. 1-B Thomason et al, 2,310 ft. W, 100 ft. S, NE cor., Sec. 23-16-6.....Location.

Southern Carbon Co.'s No. 3-C Thomason, 1,980 ft. N, 660 ft. W, SE cor., Sec. 24-16-6.....Location.

Southern Carbon Co.'s No. 4-C Thomason, 1,320 ft. S, 660 ft. W, NE cor., Sec. 31-16-6.....Location.

United Carbon Co.'s No. 1 E. W. Dunning, 1,270 ft. S, 660 ft. W, NE cor., Sec. 26-16-6.....Drlg. 2,139 ft.

United Carbon Co.'s No. 1 H. L. Thomason, 1,980 ft. S, 665 ft. E, NW cor., Sec. 11-16-6.....Location.

SABINE PARISH—PLEASANT HILL

Ark. Fuel Oil Co.'s No. 14 Logan, 1,035 ft. N, 241 ft. W. C. Sec. 33-10-12.....Rig up.

J. M. Bridges, trustee's No. 1 Cook Land Co., Sec. 34-10-12.....Rig up.

Bridges-Clark Oil Co.'s No. 2 J. W. Guy, 330 ft. S, 330 ft. W, NE cor. SE SE, Sec. 33-10-12.....Cored sand showing oil and gas 3,194 ft.

F. A. Bartlett, Jr.'s No. 1 Logan, 200 ft. S, 200 ft. E, NW cor., Sec. 27-10-12.....Rig up.

Standard Oil Co.'s No. 2 Ives, 330 ft. N, 330 ft. E, SW cor. SE SW, Sec. 34-10-12.....Fishing D.S; T.D. 3,278 ft.

SABINE PARISH—ZWOLLE

Central Pet. Co.'s No. 1 Baptist Church (was No. 1 Wall), Zwolle townsite in Sec. 31-8-12.....Bailed dry; W.O. 2,590 ft.

Tom Davis' (was T. D. Allison's) No. 1 Holliday, Sec. 31-8-12 Zwolle townsite.....S.D. wtr. 1,350 ft.

Loring Oil Co.'s (formerly Benedum & Trees Oil Co.'s) No. 4 Bowman-Hicks, 330 ft. N, 330 ft. W, C, Sec. 34-8-12.....T.A. 2,669 ft.

Loring Oil Co.'s (formerly Benedum & Trees Oil Co.'s) No. 5 Bowman-Hicks, 900 ft. S, 1,400 ft. W, C, Sec. 34-8-12.....Bailed dry 3,925 ft; arranging to deepen.

Loring Oil Co.'s No. 8 Bowman-Hicks, 330 ft. S, 330 ft. E. NW cor. SW SE, Sec. 33-8-12.....Cored hard chalk 2,593 ft.

Loring Oil Co.'s No. 10 Bowman-Hicks, 330 ft. N, 330 ft. E, SW cor. NE SE, Sec. 33-8-12.....Rigging up; drill in cable tools; T.D. 2,420 ft.

Loring Oil Co.'s No. 11 Bowman-Hicks, Sec. 34-8-12.....Began drlg. June 29; cmtd. 10-in. 105 ft; drlg. 260 ft.

Loring Oil Co.'s No. 1 Gardner, 330 ft. N, 330 ft. W, SE cor. NE, Sec. 27-8-12.....Began drlg. June 27; cmtd. 10-in. 105 ft; drlg. 757 ft.

Loring Oil Co.'s No. 1 Schull, 330 ft. S, 330 ft. E, NW cor. SW, Sec. 26-8-12.....Arranging to cmt. 6⅝-in. 2,381 ft.

Glassell & Merren's No. 1 Thomas, Lot 13, Block 3, Zwolle townsite, Sec. 31-8-12.....Oil show; S.D; W.O. 2,600 ft.

H. E. Granville's No. 1 Parrott, 1,052 ft. S, 661 ft. E, NW cor., Sec. 31-8-12.....W.O.S.R. 2,520 ft.

F. M. Hood's No. 1-B (was No. 2) Winston, 700 ft. E, 425 ft. S, NW cor., Sec. 31-8-12, Zwolle townsite....S.D. 1,065 ft.

Ohio Oil Co.'s No. 5 Bowman-Hicks, 330 ft. N, 330 ft. E, SW cor., Sec. 33-8-12.....Began drlg. June 26; cmtd. 10-in. 201 ft; drlg. 1,050 ft.

Olson Bros.' No. 2 Boone-Ferguson, 330 ft. N, 330 ft. W, SE cor. NW SE, Sec. 33-8-12.....Rig up.

W. D. Perritt et al's No. 1 Elliott, Sec. 30-8-12.....(No check); location.

Philp Bros.' No. 1 Dow, Lot 1, Blk. 18, Zwolle townsite, Sec. 31-8-12.....Dry 2,157 ft. and 2,240 ft; arranging to test 2,300 ft.

Posey et al's No. 1 Peterson, Blk. 16, Zwolle townsite, Sec. 31-8-12.....S.D. 250 ft.

Ruston Drlg. Co.'s No. 1 Bowman-Hicks, 330 ft. S, 330 ft. W, NE cor., Sec. 4-7-12.....T.A. 2,640 ft.

Ruston Drlg. Co.'s No. 1-A Bowman-Hicks, 330 ft. S, 330 ft. E, NW cor. SW SW, Sec. 35-8-12.....T.A. 2,690 ft.

A. H. Tarver's No. 3 Sabine State Bank, 330 ft. N, 330 ft. W, SE cor. SW NW, Sec. 26-8-12.....Derrick.

Wheatcroft et al's No. 1 Sabine Lbr. Co., SW NE, Sec. 31-8-12.....Cmtd. 6¾-in. 2,161 ft; top chak 2,165 ft.

Wilder et al's No. 1 Parrott, Sec. 31-8-12.....S.D. 2,160 ft.

SABINE PARISH—BLUE LAKE

R. L. Gay's No. 8 Bowman-Hicks, Sec. 18-7-13.....Bailed dry 2,494 ft; T.A.

Ruston Drlg. Co.'s No. 1-B Bowman-Hicks, 330 ft. S, 330 ft. E, NW cor., Sec. 24-7-14.....Tested dry 2,470 ft; T.A.

UNION PARISH

Greenwood Prod. Co.'s No. 2 Norsworthy, 1,320 ft. S, 1,999 ft. E, NW cor., Sec. 9-21-3.....Began drlg. June 25; cmtd. 12½-in. 261 ft; 9-in. 856 ft.

Nemours Corp.'s No. 1 Hollis, 1,989 ft. E, 660 ft. S, NW cor., Sec. 15-21-3.....Began drlg. June 26; cmtd. 12-in. 141 ft; drlg. 780 ft.

Nemours Corp.'s No. 2 Digby, 817 ft. S, 995 ft. W, NE cor. NW, Sec. 11-20-3.....Location.

Stevenson, trustee's No. 1 Stephenson, 150 ft. N, 120 ft. E. SW cor. NE NW, Sec. 11-20-3.....Cmtd. 6-in. 2,118 ft.

Stovall Drlg. Co.'s No. 1 Murray, 1,650 ft. N, 330 ft. W, SE cor. SW, Sec. 32-23-4.....Rig up.
J. P. White's No. 1 Howard, 660 ft. S, 660 ft. W, NE cor., Sec. 32-20-3e.....Drlg. 2,080 ft.

WEBSTER PARISH—SAREPTA AND SHONGALOO

Ideal O. & G. Co.'s No. 1 Coyle, 300 ft. N, 300 ft. E, SW cor. SW SE, Sec. 24-23-11.....Derrick.
H. M. Jones Drlg. Co.'s (was E. W. Bateman's) No. 1 Cook, 200 ft. S, 200 ft. W, NE cor. S½ SW NE, Sec. 2-22-11.....W.O.S.R; 1,500 ft. fluid, 50% S. W; T.D. 2,733 ft.
H. M. Jones Drlg. Co.'s (was E. W. Bateman's) No. 2 Cook, 200 ft. S, 200 ft. W, NE cor. SE NW, Sec. 2-22-11.....Drlg. 1,350 ft.
H. M. Jones Drlg. Co.'s No. 1 Womble, 860 ft. S, 200 ft. E, NW cor. SW, Sec. 1-22-11.....Derrick.
K. C. Supply Co.'s No. 2 Slack, 1,006 ft. N, 192 ft. W, SE cor. SE SW, Sec. 36-23-11.....Arranging test 2,737 ft.
K. C. Supply Co.'s No. 1 Cochrane, 330 ft. N, 330 ft. W, SE cor. E½ NW, Sec. 36-23-11.....Swbng. oil and S.W; T.D. 2,726 ft.
Magnolia Pet. Co.'s No. 2 Sally Coyle, 150 ft. N, 150 ft. W, SE cor. SE NE, Sec. 2-22-11.....Derrick.
Magnolia Pet. Co.'s No. 1 Gardner, 175 ft. N, 230 ft. E, SW cor. SE NW, Sec. 1-23-11.....W.O.S.R. 2,727 ft.
Magnolia Pet. Co.'s No. 4 Scroggins, 150 ft. N, 150 ft. E, SW cor. SW NW, Sec. 1-22-11.....Rig up.
Merrick Oil Corp.'s No. 3 Slack, 330 ft. N, 330 ft. W, SE cor. SW SE, Sec. 36-23-11.....Derrick.
Mt. Vernon Oil Co.'s No. 3 Pardee, 200 ft. S, 1,500 ft. E, NW cor. NE SW, Sec. 3-22-11.....1,400 ft. fluid; 6-ft. sand; W.O. S.R; T.D. 2,653 ft.
Sarepta Oil Co.'s No. 3 Gardner, 396 ft. N, 78 ft. E, SW cor. NW NW, Sec. 6-22-10.....Derrick.
S. H. Riggs, trustee's No. 1 L. & A., 250 ft. S, 530 ft. E, NW cor. NW NE, Sec. 1-22-11.....S.D. 2,100 ft.
S. H. Riggs, trustee's No. 2 L. & A., 255 ft. S, 600 ft. W, NE cor. SW NE, Sec. 36-23-11.....Derrick.
S. H. Riggs, trustee's No. 3 L. & A., 255 ft. N, 600 ft. W, SE cor. NW SE, Sec. 36-23-11.....Location.
S. H. Riggs, trustee's No. 4 L. & A., 255 ft. S, 600 ft. W, NE cor. NW SE, Sec. 36-23-11.....Location.
W. O. Neely's No. 1 J. R. Slack, 150 ft. N, 150 ft. E, SW cor., Sec. 12-22-11.....Location.
Sarepta Oil Co.'s No. 2 Gardner, NE SW, Sec. 1-22-11.....Rig up.
Sarepta Oil Co.'s No. 1 Slack, SW cor. NW NE, Sec. 36-23-11.....Rig up.
Wingfield et al's No. 2 Slack, 163 ft. S, 140 ft. E, NW cor. NE, Sec. 1-22-11.....Drlg. 1,400 ft.
Wingfield et al's No. 3 Slack, 132 ft. S, 760 ft. E, NW cor. NE, Sec. 1-22-11.....Began drlg. June 27; cmtd. 10-in. 180 ft; drlg. 600 ft.

ARKANSAS

JOHNSON COUNTY

Ark.-La. P. L. Co.'s No. 1 Cline, 660 ft. S, 660 ft. W, NE cor. NE SE, Sec. 16-10-24.....Arranging to cmt. 13⅜-in. 1,550 ft.
Blackwell O. & G. Co.'s No. 1 Western Coal & Mining Co., C NE SE, Sec. 20-9-25.....Arranging to cmt. 8¼-in. 1,160 ft.
Conn Grable's No. 1 Hoeing, 720 ft. N, 590 ft. W, SE cor., Sec. 20-9-25.....Began drlg. June 18; cmtd. 10-in. 100 ft; 8¼-in. 1,160 ft.

NEVADA COUNTY

Roy Davis et al's No. 1 Chas. Henry, 1,120 ft. N, 1,120 ft. W, SE cor., Sec. 10-12-20.....Rig up.
C. F. Steele's No. 1 E. W. Groves, Sec. 21-14-20.....S.D. 2,810 ft.

OUACHITA COUNTY—SMACKOVER

Standard Oil Co.'s No. 7 Farris, 200 ft. S, 200 ft. W, NE cor. NW NW, Sec. 34-15-15.....Derrick.

OUACHITA COUNTY—STEPHENS

Magnolia Pet. Co.'s No. 1 Grayson, 230 ft. S, 540 ft. W, NE cor. Lot 31, Sec. 21-15-19.....O.W.D.D; completed March 19, 1930; produced 100 bbls. oil, 225 bbls. S.W, 1,480 ft; cored sand showing oil 2,123 ft.

UNION COUNTY—CHAMPAGNOLLE

Lion Oil Ref. Co.'s No. 2 Kelly, Sec. 9-17-14.....O.W.D.D; completed Apr. 4, 1929. 6,800,000 ft. gas 2,822 ft; perforated csg. 2,735-60 ft; arranging 4½-in. csg. 3,166 ft; cored S.W. sand 3,171-84 ft: T.D. 3,195 ft; bailing to test 3,195 ft.
Magnolia Pet. Co.'s No. 1 Gregory, Sec. 15-17-14.....O.W.D.D; milling csg. 2,658 ft; old T.D. 2,851 ft.
Sundby et al's No. 2 Perdue, 75 ft. S, 150 ft. E, NW cor., Sec. 33-16-14.....Reaming to bottom; T.D. 3,205 ft.

UNION COUNTY—EL DORADO

H. L. Hunt's No. 6 Pratt, 150 ft. N, 330 ft. E, SW cor. NE NE, Sec. 7-18-15.....S.W. 2,214 ft.
Malloy & Co.'s No. 1 Murphy, Sec. 1-18-16.....Rig up; W.O.
Malloy & Co.'s No. 3 Robertson, NE cor. S½ SW NE, Sec. 6-18-15.....Location.

EAST TEXAS

HARRISON COUNTY

Calatex O. & G. Co.'s No. 6 Agurs, 755 ft. N, 699 ft. W, Mile Post 27, in J. Womack Sur.....Location.
Shell Rock Pet. Co.'s No. 1 Oliver Dougherty, W. D. Burris Sur.....Drlg. sand 3,445 ft.

PANOLA COUNTY

Ark.-La. P. L. Co.'s No. 2-A G. W. Brumble, 477 ft. W, 473 ft. S, NW cor. Jno. Womack Sur. in B. C. Jordan Sur.....Drlg. hard lime 3,175 ft.
Jackson et al's No. 1 Dunham, 150 ft. W, 150 ft. N, SE cor. M. I. Dunham 29 ac., in Chas. Haley Sur.....Rig up.
Nat. Gas Products Co.'s No. 3 Tom Moore, 339 ft. E, 7,928 ft. S, NW cor. B. C. Jordan Sur.....Drlg. 2,460 ft.
The Texas Co.'s No. 9 G. W. Brumble, 2,570 ft. E, 180 ft. S, SW cor. E. F. Mitcheson Sur. in Jno. Womack Sur.....Drlg. 2,050 ft.
Doris Thomason's No. 15 Crenshaw, 1,992 ft. S, 2,305 ft. E, SW cor. Jno. Womack Sur. in B. C. Jordan Sur.....Derrick.

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

(Continued from Page 47)

CONCORDIA PARISH

A. C. Glassell's No. 1 Pittsfield Plantation, N 9°, E 1,320 ft., SW cor., Sec. 41-8-10.....Blew out between 1,392-1,460 ft; estimated 1,000,000 ft. gas; bridged; arranging to recmt. 8¼-in. 1,370 ft.
Joe Marr et al's No. 1 Maxwell, C, Sec. 35-3n-8e.....Cmtd. 8-in. 2,000 ft; T.D. 2,820 ft.

DE SOTO PARISH

Benson Oil Co.'s No. 1 Harris, Sec. 6-10-13.....Tested dry; show gas; W.O. 2,650 ft.
Joe Burnham et al's No. 1 Mary Hood, 320 ft. W, 201 ft. S, NE cor. SE NE, Sec. 3-11-14.....Top Nacatoch 1,060 ft; drlg. 1,120 ft.
Sam Gold et al's No. 1 Platt, 200 ft. S, 200 ft. W, NE cor. SW, Sec. 23-13-14.....Rig up.
Gulf Ref. Co.'s No. 1 Dry, 2,380 ft. N, 200 ft. E, SW cor., Sec. 14-11-15.....Derrick.
Bud Harrell's No. 1 Horton, 450 ft. E, 150 ft. N, SW cor., Sec. 4-11-11.....S.D. 1,060 ft.
Odell & Lawton's No. 1 Tidwell-Tull, 300 ft. N, 600 ft. E, SW cor. NW, Sec. 11-13-14.....Began drlg. June 26; cmtd. 10-in. 55 ft; drlg. 900 ft.
Frank Melat, Inc.'s No. 1 Schryver, 175 ft. E, 175 ft. N, SW cor. NW SW, Sec. 35-14-13.....Cored 5-ft. sand 2,775 ft; arranging to cmt. 6-in.
Michlouzanna O. & G. Co.'s No. 1 Payne, 410 ft. S, 398 ft. E, NW cor., Sec. 12-11-16.....O.W.D.D.; completed by Clark & Melat; arranging to deepen; T. D. 2,556 ft.
R. O. Roy's No. 1 Nelson, 660 ft. S, 660 ft. E, NW cor., Sec. 36-15-13.....Drlg. 1,350 ft.

EAST CARROLL PARISH

La. Gas & Fuel Co.'s No. 1 Hicks, 1,320 ft. N, 759 ft. W, SE cor., Sec. 12-19-10.....Cmtd. 8⅛-in. 2,333 ft.

FRANKLIN PARISH

Davis et al's No. 1 Moore, 600 ft. W, 200 ft. S, NE cor., Sec. 12-11-6.....S.D. 1,430 ft.

JACKSON PARISH

El Dorado Chief O. & G. Co.'s No. 1 Sou. Advance Paper Bag Co., 225 ft. N, 275 ft. E, SW cor. SW NE, Sec. 35-15-4.....S.D. repairs; T.D. 1,100 ft.

LINCOLN PARISH

Ark. Fuel Oil Co.'s No. 1 Lewis & Co., 300 ft. N, 300 ft. W, SE cor. NW SE, Sec. 26-20-4.....Top red beds 3,305 ft; drlg. 3,460 ft.

MOREHOUSE PARISH

Ruston Drlg. Co.'s No. 1 Tucker & Platt, 660 ft. N, 860 ft. W, SE cor. NE, Sec. 8-20-6.....Drlg. shale and boulders 1,235 ft.

NATCHITOCHES PARISH

W. M. Coats' No. 1 Collins, 730 ft. N, 50 ft. E, C, Sec. 28-9-10.....Began drlg. May 3; cmtd. 12½-in. 150 ft.; S.D. for title work.
S. D. McDaniel's No. 2 Clark & Morse, 800 ft. E, 350 ft. N, C, Sec. 23-5-6.....Tested 1,000,000 ft. gas and S.W. 3 ft.; S.D. for orders; T.D. 2,526 ft.
Robeline O. & G. Co.'s No. 1 Winn, 558 ft. N, 348 ft. E, SW cor. SE, Sec. 7-8-9.....S.D. 1,600 ft.

RAPIDES PARISH

Ayers Bros.' No. 1 Wickliff, 2,790 ft. N, 150 ft. E, SW cor., Sec. 9-5n-2e.....S.D. for fuel 2,650 ft.

RED RIVER PARISH

W. D. Ball's No. 1 Krumholtz, 660 ft. S, 660 ft. E, NW cor., Sec. 32-14-10.....Tested S.W. and show oil 6 ft. sand 1,700 ft.; drlg. shale 1,866 ft.
E. C. Lucas' No. 1 La. Pecan Co., Sec. 26-13-11.....Cmtd. 8-in. 785 ft.
Geo. L. Pace et al's No. 1 Clarkson, 200 ft. S, 200 ft. E, NW cor. NE, Sec. 30-12-9.....Rig up.

RICHLAND PARISH

Austin & McDonald's No. 1 Hunt, 594 ft. N, 660 ft. E, SW cor., Sec. 13-17-5.....Derrick.
Austin & McDonald's No. 2 Millsaps, SW cor., Sec. 17-17-6.....Waiting orders; T.D. 2,657 ft.
Austin & McDonald's No. 3 Millsaps, 1,980 ft. S, 660 ft. E, NW cor., Sec. 16-17-6.....Tested S.W.; W.O. 2,477 ft.
Austin & McDonald's No. 4 Millsaps, NW cor., Sec. 16-17-6.....Location.
Austin & McDonald's No. 5 Millsaps, 2,640 ft. N, 1,320 ft. W, SE cor., Sec. 8-17-6.....Derrick.
W. C. Feazel's No. 1 Landrum, 620 ft. N, 4,573 ft. E, SW cor., Sec. 6-16-7.....Derrick.
Island Gas Co.'s No. 1 Noe, 1,902 ft. N, 660 ft. W, SE cor., Sec. 3-16-5.....Location.
Palmer Corp.'s No. 1 Seubert, 1,356 ft. N, 88° 35' W, 660 ft., SE cor., Sec. 1-16-5.....Rig up.

SABINE PARISH

Ark.-La. P. L. Co.'s No. 1 Whitney, 660 ft. S, 660 ft. E, C, Sec. 28-10-14.....Cmtd. 10-in. 215 ft; drlg. 1,235 ft.
Lohman & Walker's No. 1 Hubley, 330 ft. N, 330 ft. W, SE cor. SE NE, Sec. 21-7-11.....Derrick.
Boone, trustee's No. 1 J. B. Hill, NE, Sec. 4-6-11.....(No check); derrick.
Longoria et al's No. 1 Belton, 330 ft. S, 330 ft. E, C, NE, Sec. 31-9-13.....Rig up.
Loring Oil Co.'s No. 1 Peavy-Wilson Lbr. Co., 200 ft. S, 330 ft. W, NE cor. SW NE, Sec. 21-6-13.....Did not cmtd. 10-in. 3,618 ft; bailed dry; drlg. Blossom 3,737 ft.
Lohman et al's No. 1 Watt Lbr. Co., 150 ft. S, 330 ft. E, NW cor. NE SW, Sec. 18-4-11.....Rig up.
J. C. McDaniel & Lieber's No. 1 Batson, 675 ft. N, 318 ft. E, SW cor. SE, Sec. 16-18-12.....Show oil; bailed dry; W.O. 2,526 ft.
Paramount O. & G. Co.'s No. 1 Woolems, 330 ft. N, 330 ft. W, SE cor. NE NW, Sec. 11-6-12.....S.D. 1,656 ft.
Pelican O. & G. Co.'s No. 2 La. Long Leaf Lbr. Co., C NE, Sec. 20-7-12.....Tested 100,000 ft. gas 2,707 ft.; arranging test 2,833 ft., dry 2,833 ft; 50 ft. fluid 10% oil; swbng. 2,935 ft.
Pelican Nat. Gas Co.'s No. 2 Sabine Lbr. Co., 350 ft. S, 350 ft. E, C, Sec. 16-7-12.....Drlg. chalk 2,550 ft.
D. H. Riddick's No. 1 Scretchfield, 400 ft. E, 400 ft. N, SW cor. NW SE, Sec. 18-9-12.....S.D. 3,280 ft.
San Miguel Oil Corp.'s No. 1 Blankenship, 660 ft. N, 660 ft. E, SW cor. SE, Sec. 20-9-11.....Derrick.
H. T. Stacey et al's No. 1 Polly, NE cor. NE NE, Sec. 18-8-12.....Rig up.
Teteco Oil Corp.'s No. 1 La. Long Leaf Lbr. Co., 325 ft. S, 100 ft. W, NE cor. NW, Sec. 18-6-12.....Show gas and S.W; drlg. shale and lime 4,015 ft.

TENSAS PARISH

A. R. Willis et al's No. 1 Currey, 1,320 ft. S, 1,320 ft. E, NW cor., Sec. 39-11-12.....Cmtd. 8-in. 1,830 ft.

ARKANSAS

ASHLEY COUNTY

J. D. Marcum Co.'s No. 1 McGarry, 300 ft. W, 100 ft. S, C, Sec. 10-19-4.....O.W.D.D; old T.D. 3,300 ft; cmtd. 6⅝-in. 3,450 ft; T.D. 3,555 ft.

CALHOUN COUNTY

Tidal Oil Co.'s No. 1 Freeman-Smith Lbr. Co., 150 ft. C S line, NE NW, Sec. 3-16-14.....Lost hole 105 ft; skidded 5 ft. E; began second hole June 25; cmtd. 15½-in. 127 ft; arranging to cmt. 12½-in. 618 ft.

CLEBURNE COUNTY

Cosden Oil Co. of Ark.'s No. 1 Donophan, 100 ft. S, 660 ft. E, NW cor. SW SE, Sec. 19-9-10.....Drlg. 3,695 ft.
Donnelly-Craver et al's No. 1 Doniphan Lbr. Co., SE cor. NW, Sec. 33-11-9.....Drlg. 1,200 ft.

COLUMBIA COUNTY

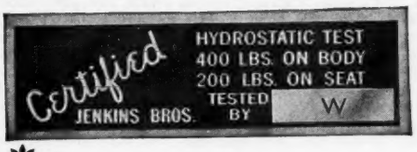
S. Y. Dorfman et al's No. 1 Merritt, 923 ft. S, 160 ft. W, NE cor. SE NW, Sec. 25-19-22.....S.D. 400 ft.
Parker et al's No. 1 Franks, 330 ft. S, 330 ft. W, C, Sec. 25-19-22.....S.D. 2,835 ft.
J. K. Wadley's No. 1 Longino, 330 ft. E, 330 ft. S, NW cor., Sec. 32-18-22.....Top Nacatoch 1,951 ft; drlg. 2,112 ft.

DREW COUNTY

McClintock & Goodka's No. 1 Ogles, 920 ft. W, 400 ft. S, NE cor., Sec. 35-13-5.....S.D.; W.O. 2,625 ft.

FRANKLIN COUNTY

Red Bank Oil Co.'s No. 1 Edtin, SW cor., Sec. 33-10-26.....Tested 1,000,000 ft. gas 1,317 ft. and 1,576 ft.; show gas and S.W. 2,155 ft.; drlg. 2,250 ft.



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RATED pressures for steam, oil, water and gas are cast in the valve body of each Jenkins Iron Body Gate Valve. The "certified" brass plate gives the hydrostatic factory test which each valve has passed.

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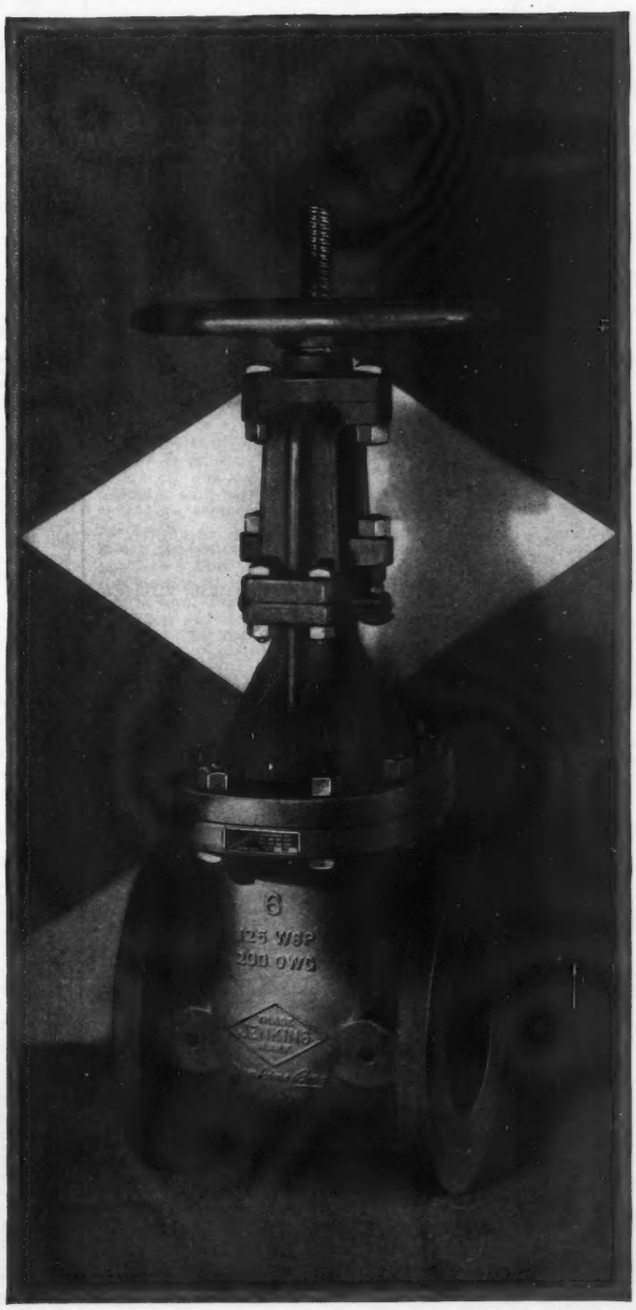

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Inside Screw, Stationary Spindle; Outside Screw & Yoke, Rising Spindle (Screwed or Flanged)	Rated Working Pressure, Pounds			
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**Illustrated above is facsimile of certified brass plate carried by Fig. 651, Jenkins Standard Iron Body Gate Valve, rising spindle, illustrated at right* ➞

Jenkins
VALVES
Since 1864

GARLAND COUNTY

Givens et al's No. 1 Garrett, 660 ft. S, 660 ft. W, C, Sec. 1-3-19.....S.D.; W.O. 3,604 ft.

GRANT COUNTY

J. R. Lockhart's No. 1 Cunningham, 285 ft. S, 285 ft. W, NE cor., Sec. 11-5-16 .....Derrick.

LAFAYETTE COUNTY

Crawford Drlg. Co.'s No. 1 Vaughn, 200 ft. S, 200 ft. W, NE cor. SE NE, Sec. 25-19-25.....Derrick.

LITTLE RIVER COUNTY

A. L. Buck's No. 1 Greason, NW NW, Sec. 25-12-32....Fishing bit and collar; T.D. 2,502 ft.

LOGAN COUNTY

J. H. Flowers' No. 1 J. H. White, Sec. 13-6-26.....S.D.; W.O. 3,610 ft.

MADISON COUNTY

J. W. Baxter's No. 1 Hallem, C NE SW, Sec. 17-16-26..Began drlg. June 8; S.D. repairing rig; T.D. 160 ft.

MILLER COUNTY

Lenz et al's No. 1 G. W. Johnson, 400 ft. S, 400 ft. W, NE cor. SW, Sec. 24-15-26.....Drlg. 2,130 ft.

OUACHITA COUNTY

Anderson & Wimmer's No. 1 Buck, Sec. 7-15-17.....Sidetracking D.S.; T.D. 2,735 ft.
Belmont et al's No. 1 Buck, SE cor. SE SW, Sec. 16-15-17 .....Began drlg. June 20; S.D.

PIKE COUNTY

Theo. Davis, trustee's No. 1 Ruth Wilson, 200 ft. S, 200 ft. W, NE cor., Sec. 25-5-26.....Fishing 700 ft.; S.O.

POPE COUNTY

Ark.-La. P. L. Co.'s No. 1 J. E. Moore, 330 ft. N, 330 ft. E, SW cor. SE NE, Sec. 16-9-21 .....Location.
Cosden Oil Co.'s No. 1 Mo. Pac. R.R., 660 ft. N, 660 ft. E, SW cor. NW SE, Sec. 13-9-19.....Drlg. lime 4,459 ft.

SCOTT COUNTY

Heavener O. & G. Co.'s No. 1 Riser, Sec. 36-4-26.....Tested show of gas 1,508 ft.; fishing cable tools; T.D. 1,530 ft.

SEBASTIAN COUNTY

W. M. Greeson's No. 1 Spears, Sec. 9-7-29.....Drlg. 2,250 ft.
Lava O. & G. Co.'s No. 9 Cason, Sec. 21-8-30.....D.S. test 2,700 ft., 1,500,000 ft. gas; drlg. 2,710 ft.
Mansfield Gas Co.'s No. 14 fee, Lot 10, Sec. 1-4-31.....S.D. 200 ft.
Ozark Nat. Gas Co.'s No. 10 Weaver, 660 ft. N, 660 ft. W, SE cor. SE NE, Sec. 27-8-30.....Drlg. 400 ft.

ST. FRANCIS COUNTY

Brownlee Drlg. Co.'s No. 1 Whitted, 110 ft. N, 110 ft. E, SW cor. SE NW, Sec. 28-4-1.....Drlg. 2,786 ft.

UNION COUNTY

S. B. Hickman's No. 1 Hogg, 330 ft. S, 150 ft. E, NW cor. SE SE, Sec. 35-16-17.....Dry 1,987-2,079 ft.; fishing 2,157 ft.
Marine Oil Co.'s No. 2 Simmons, 300 ft. N, 300 ft. E, SW cor. SE NW, Sec. 10-18-13.....Rig up.
Marine Oil Co.'s No. 4-A Thompson, 330 ft. N, 330 ft. W, SE cor. SW NE, Sec. 10-18-13 .....Began drlg. June 28; cmtd. 10-in. 311 ft.
Marine Oil Co.'s No. 3-B Winn, 330 ft. S, 330 ft. W, NE cor., Sec. 10-18-12.....Swbng; making occasional small heads of oil; 5 ft. sand; T.D. 3,559 ft.
Modisette Drlg. Co.'s No. 4 Union Sawmill, 300 ft. W, 300 ft. N, SE cor., Sec. 14-18-14.....Location.
South El Dorado Oil Co.'s No. 1 Traylor, 330 ft. N, 138 ft. W, SE cor. NW NE, Sec. 9-19-15.....W.O.S.R; 700 ft. fluid; T.D. 2,186 ft.

VAN BUREN COUNTY

Glenn Kohle et al, trustee's No. 1 Scalan, 200 ft. S, 200 ft. W, NE cor. SE NW, Sec. 5-19-13.....S.D. 50 ft.

WASHINGTON COUNTY

Delbert & Graves' No. 1 Cunningham, Sec. 14-15-32.....S.D.; W.O. 602 ft.
C. H. Willoughby's No. 1 Jones, Sec. 34-16-30.....Trying to kill wtr. flow 2,150 ft.; hard sand showing oil 1,637-40 ft.
Lincoln Leaseholding, Synd.'s No. 1 Lincoln, Sec. 30-15-32.U.R. 8-in. to T.D. 1,500 ft.
H. H. Taylor et al's No. 1 Runny, C NE SW, Sec. 1-13-29.Cmtd. 12½-in. 45 ft; drlg. 550 ft.

WHITE COUNTY

Letona Synd.'s No. 1 Letona, SE cor. NW SW, Sec. 35-9-8 .....Pulled 5 3/16-in.; S.D.; W.O.; T.D. 3,650 ft.

YELL COUNTY

Tegmeir & Luckett's No. 1 Falcon, Sec. 36-1-21.....Gas show 4,160 ft.

EAST TEXAS

BOWIE COUNTY

Lee Timberlake's No. 1 Tidwell, 2,800 ft. N, 300 ft. W, SE cor., Jos. Eskell Sur. .....Base Annona chalk 1,694 ft; reaming to bottom; T.D. 2,820 ft.

CAMP COUNTY

McDonald Bros.'s No. 1 Tillery, 150 ft. E, 450 ft. S, NW cor. 127-ac. tract, in J. H. Murphy Sur. .....Location.
Rogers et al's No. 1 Enfelt, R. M. Montgomery Sur. .....T.A. 3,045 ft.

CASS COUNTY

Phillips Pet. Co.'s No. 1 J. R. Olds, 300 ft. N, 170 ft. E, SW cor. J. A. Stephenson Sur. .....Rig up.

MARION COUNTY

W. D. Chew's No. 1 Fee, 2,350 ft. W, 1,275 ft. N, SE cor., W. J. Hamilton Sur. .....Began drlg. June 30; cmtd. 12½-in. 220 ft.
P. E. Hussey's No. 1 A. A. Trammell, Chas. Lockhart Sur. .....Cmtd. 10-in. 60 ft; S.D. fuel.

RED RIVER COUNTY

D. M. Buffington's No. 1 Hossler, E. Hughhart Sur. ....S.D. 2,865 ft.
Johnson Pet. Co.'s No. 2 Randolph, Edw. Dean Sur. ....Swedging 2 jts. collapsed 8-in.; arranging cement 6⅝-in. and packer 2,182 ft.

SHELBY COUNTY

Loring Oil Co.'s (formerly Benedum & Trees Oil Co.'s) No. 1 McCann, D. G. Green Sur. .....Coring hard lime 4,911 ft.
Chapperall Oil Co.'s No. 2 Holt, Matthew Moore Sur. ....S.D. fuel; T.D. 3,300 ft.

MISSISSIPPI

ALCORN COUNTY

Alcorn Pet. Co.'s No. 1 Matthews, SE cor., Sec. 14-2s-7e..Fishing 6-in. and tools 2,392 ft.; T.D. 2,735 ft.

CHICKASAW COUNTY

Hightower & Golson's No. 1 Flemming, NE cor., Sec. 20-13-3 .....Fishing 8¼-in. csg. 1,414 ft.

HINDS COUNTY

Oscar Brown's No. 1 Riverside (formerly Hennessee et al's), SE cor. SE SW, Sec. 23-16-5.....Set 12½-in. 30 ft.; S.D. 1,050 ft.
Cane River Oil Co.'s No. 1 Lufkin, Sec. 15-5-1e.....Began drlg. May 28; S.D. waiting on 12½-in. csg.; T.D. 406 ft.
Dome Oil Co.'s No. 1 Elton, NE cor. SE SW, Sec. 5-4-1e..Drlg. 1,387 ft.
Interior Oil Co.'s No. 1 Belhaven Heights, 1,165 ft. W, 614 ft. S, NE cor., Sec. 2-5-1e.....Derrick.
Interior Oil Co.'s (was Progressive Oil Co.'s) No. 1 Mays, C NE NE, Sec. 2-5-1e.....Derrick.
Jackson Oil Co.'s No. 1 Central Cotton Oil Co., NW cor. SW NW, Sec. 3-5-1e.....Derrick.
Jackson O. & G. Co.'s No. 1 Taylor, SE cor. SE, Sec. 35-6-1e .....S.D. igneous rock 3,232 ft.
Love Bros.' (was Love O. & G. Co.'s) No. 1 Bridges-Hilzim, 870 ft. N, 920 ft. W, SE cor., Sec. 35-6-1e...S.D. 240 ft.
Love O. & G. Co.'s No. 1 Gordon, SW cor. SW NW, Sec. 8-5-1e .....Derrick.
Love Pet. Co.'s No. 1 Hutton, 538 ft. S, 291 ft. E, NW cor. NE, Sec. 11-5-1e.....Derrick.
T. G. & F. Co.'s No. 1 Toole, SW NE, Sec. 28-6-1e.....Rig up.
Love Pet. Co.'s (was Love O. & G. Co.'s) No. 2 Mendoza, NE cor. Lot 2, Sec. 12-5-1e.....Derrick.
Ohio Oil Co.'s No. 1 School, SE cor. N½ NE NE, Sec. 16-5-1e .....Derrick.
Mrs. Reeder et al's No. 1 State, SE cor. NW NW, Sec. 25-6-1e .....W.O.; T.D. 2,905 ft.
Tri-State O. & G. Co.'s No. 1 Wilson, SW cor. SE NE, Sec. 23-6-1e .....Derrick.
J. A. Weir et al's No. 1 Holliday & Ross, NW SE, Sec. 8-6-2e .....Rig up.

HUMPHREYS COUNTY

E. S. Steele et al's No. 1 C. B. Box, SE cor. SE NE, Sec. 25-14-4w .....Set 12½-in. 60 ft.; S.D.

LAUDERDALE COUNTY

Lauderdale O. & G. Co.'s No. 1 Lackey, 990 ft. S and E, NW cor. NE, Sec. 2-7-16.....Tested S.W. 3,252 ft.; S.D. 3,420 ft.
Meridian O. & G. Co.'s No. 1 Hauser, Sec. 33-8-18.....S.D.; W.O.; sandy shale 2,826 ft.
J. R. Smith Oil Co.'s No. 1 C. F. Craig, Sec. 2-16-14.....Derrick.

LAFAYETTE COUNTY

Banks-Goode et al's No. 1 May, 113⅓ rds. S, 26 rds. E, NW cor. SW, Sec. 22-10-1w.....Derrick.

LINCOLN COUNTY

Lincoln O. & G. Co.'s No. 1 Pat Case, NE cor. NE, Sec. 21-3-6 .....S.D.; W.O. 2,231 ft.

MONROE COUNTY

Amory Dev. Co.'s No. 1 Bourland, Sec. 2-13-19.....S.D. 2,912 ft.; bailer lost in hole.
Amory Pet. Co.'s No. 1 Hall, Sec. 8-13-19.....Shot 2,402-18 ft.; small show oil; arranging to shoot 2,387-95 ft.
Park Bowser et al's No. 1 Cowart, second hole, Sec. 2-12-19 .....S.D. 30 ft.

RANKIN COUNTY

Gulf Ref. Co.'s No. 1 Rainey, NW NW, Sec. 13-5-1e.....Drlg. igneous rock 3,537 ft.
R. A. Moore et al's No. 1 Interior Lbr. Co., Sec. 28-6-1e..Drlg. 900 ft.
Interior Oil Co.'s No. 1 Moore, 660 ft. N, 660 ft. W, SE cor. NW NW, Sec. 28-6-2e.....S.D. 900 ft.
Pearl River O. & G. Co.'s No. 1 Littlefield, SE NE, Sec. 12-5-1e .....S.D. waiting on 10-in. csg.; T.D. 824 ft.

WARREN COUNTY

El Dorado Oil Co.'s No. 1 Dornbush, Sec. 8-18-15.....S.D. 2,475 ft.; 2,350 ft. D.S. in hole; W.O.

YALOBUSHA COUNTY

Carter Oil Co. and J. D. Collett's No. 1 Blackmur, 330 ft. S, 990 ft. W, Sec. 14-11-4.....Reaming; T.D. 2,438 ft.

YAZOO COUNTY

Amerada Pet. Corp.'s No. 1 Doherty, SW SW, Sec. 24-12-2 .....Drlg. sandy lime 5,133 ft.

ALABAMA

LAMAR COUNTY

Griggs & Knapp's No. 1 Wefel, Sec. 25-12-14.....T.A. 1,740 ft.

LAUDERDALE COUNTY

A. D. Morton et al's No. 10 O'Neal est., Sec. 8-2s-13w...Cmtd. 12½-in. 125 ft.; drlg. hard lime 905 ft.

MARION COUNTY

Hobson et al's No. 1 John Clark, SE, Sec. 29-11-14.....Derrick pattern.

WASHINGTON COUNTY

S. A. Hobson's No. 1 Hobson Bros., Sec. 9-8-2.....S.D.; W.O.; flow at 1,450 ft.
S. A. Hobson's No. 1 Wilson, Sec. 27-7-1.....Fishing bailer; T.D. 881 ft.
Oscar Brown's No. 2 Land & Cotton Co., Sec. 25-3-2w. Drlg. 700 ft.

IS SECOND OLDEST PRODUCING OIL FIELD

(Continued from Page 64)

still producing some 8 bbls. per day, which was drilled and first produced oil 42 years ago. We visited this well and took some pictures of it. The old steam engine was still belted to the bandwheel, but the connecting rod of the engine was removed and the crankshaft was driven by a small electric motor which was belted to a pulley attached to the flywheel of the engine. This arrangement impressed us as being not only novel but also rather convenient. It permits the use of a small motor for pumping, and still leaves the more powerful steam engine ready for use for pulling or cleaning out. The arrangement is found on several of the older wells, but in the later installations where a motor is installed, as soon as the well is put to pumping there is no steam engine, and pulling or cleaning a well must be done with a portable unit.

Electric Power

The Southern Colorado Power Co. has a main transmission electric power line extending from Pueblo through the Florence Field to Canon City. This line carries high tension current at 66,000 volts which is transformed down to 2,200 volts at a major location for the oil field; then at convenient locations it is again transformed to 440 and 120 volts for consumption.

The Continental Oil Co. is probably the largest consumer of power. Its maximum demand is 136 to 140 horsepower load. There are probably 200 horsepower motors connected. Their cost for electric power amount to $540 to $590 per month.

The rate of the Power company consists of a primary and a secondary charge, with a 10 per cent discount for prompt payment. As near as we could understand it, the rate is $0.0111 per kilowatt hour, payable monthly. If the amount of power consumed amounts to more than 250,000 kilowatt hour then the excess is charged at the rate of $0.009 per kilowatt hour.

Pumps of Beam Type

A great many wells have derricks. Most of these are pumped in the standard way with beam, and bandwheel belted in about the usual way; but at a great many of the new wells in the west field is found a novel design, which was originated by the production manager of the Continental Oil Co. This consists of the regular beam and samson post with the beam cut to extend at one end for connecting the counterbalance. The samson post is supported upon twin sills extending from the casinghead to the motor base. These sills support not only the samson post but also the motor, countershaft and the bandwheel shaft. The whole makes a compact and efficient pumping unit. When this pumping unit is used in place of a derrick, a mast is provided for pulling the wheel. Six to ten horsepower motors are sufficient to pump the wells when they are properly counterbalanced. Both the suspended weight and the grasshopper types of counterbalance are found in the field.

The whole field has had approximately a thousand wells drilled, scattered irregularly and far apart. It is impractical to pump them with a central power. It would seem possible that more closely located wells would drain the area better, but on account of local physical conditions, it would be uncertain if better results could be obtained. There is great difficulty in producing due to paraffin in the wells. No kind of air, gas or water drive has been tried, we were told, and it is not known if experiments of such character would show improvement in rate of oil produced. The gravity of the oil produced is 31 degrees. The paraffin base makes it valuable for lubricating qualities. The gasoline content, by usual distillation test, is only 14 per cent. There is, at present, a total production for the field of approximately 900 bbls. per day. The refinery capacity at Florence is probably five or six times this proudction, so that oil from other fields is refined there also.

Refineries

There are two oil refineries, namely, those of the Continental Oil Co. and the Standard Oil Co. of Indiana. They are both located at the east side of town and convenient to each other so that the Continental delivers some of its products to the Standard, where it is refined by use of cracking stills.

The Continental Oil Co. owns nearly all of the production of the field, and it also receives oil at the refinery from other fields. It has production in New Mexico which is very high gravity—68 degrees. This is shipped to Florence in insulated tank cars and blended with heavier oil at the refinery.

The market for petroleum products in

Colorado can hardly be improved upon. Filling stations do a big business supplying the streams of tourists passing through on their way across the continent, and also to the thousands who visit the region for summer vacations. At filling stations, regular straightrun refined gasoline, during this summer, ranged from 23 to 24½ cents and high compression gasolines were approximately 3 cents per gallon higher. Prices of lubricating oil were also well sustained. Special tractor oil is furnished for farm implements and road tractors, and the machinery of mining and industrial works furnish no small part of the market. It will be seen that the market in this locality is ample to consume all the petroleum produced.

CALIFORNIA FIELDS

(Continued from Page 56)

day on the beam from 3.002 feet. In the Fruitvale Field of Kern County George F. Getty successfully completed No. 1 Fairhaven pumping 230 bbls. of 18.1 gravity oil per day from 3,770 feet, the hole having been plugged back because of a gray sand logged at 4,003 feet. The General Petroleum added a new well to its list of producers in the Mount Poso Field when No. 12 Heisen was brought in pumping 202 bbls. during the initial 24 hours following completion at 1,604 feet. At Round Mountain the Shell finished No. 12 Jewett as a 189-bbl. pumper from 1,694 feet, but it was shut in subsequent to completion. Several additional potential producers are under way in the Round Mountain Field at the present time and at least two of them should be finished within the next 15 days.

Kettleman Hills

The Continental Oil Co. had not yet received official notifciation from the United States Department of Interior that it will be privileged to drill three additional wells on its acreage adjoining that section of the field being developed by the Petroleum Securities but arrival of these documents are expected momentarily. It remains to be seen, however, whether the Continental will feel justified in spending approximately $750,000 for development work in view of the fact that the three wells in question will not be privileged as far as production is concerned. Reports indicate that the Departmnet of Interior has merely granted the company permission to drill but is withholding the permission to produce the wells after completion. The treatment which the Continental Oil Co. has received from the Department of Interior and the arbitrary policy adopted by the Department has aroused the ire of operators with the result that an antagonism has developed which is not especially conducive to curtailment work. The proposed unit plan of operation was receiving serious consideration up until recently but the success of this program appears doubtful at the present time due to what operators term as "the high hatted attitude of the Department of Interior." Secretary of Interior Wilbur should take immediate steps to allay this criticism in the interest of conservation as July 1, 1931, while still a year away, may bring a new crisis to the oil industry unless some workable constructive supplementary agreement can be worked out. Current production at Kettleman Hills approximates 14,400 bbls. of crude oil and 445,000,000 feet of natural gas per day from six wells with 25 others standing cemented on top of the pay. The Continental's No. 8 Elliott in Section 12-22-17 is producing 3,425 bbls. of oil and 115,000,000 feet of natural gas per day. No. 1 Elliott on the Milham, in Section 28-21-17, is flowing 1,975 bbls. of oil and 65,000,000 feet of natural gas daily while No. 1 Felix of the Petroleum Securities is doing 875 bbls. of oil with 25,000,000 feet of natural gas per day, the Standard's No. 38 in Section 35-21-17 approximately 2,550 bbls. of oil with 65,000,000 feet of gas, No. 8 in Section 1-22-17, 3,075 bbls. of oil with 90,000,000 feet of gas and No. 81 in Section 11-22-17. 2,500 bbls. of oil and 85,000,000 feet of natural gas.

ROCKY MOUNTAIN AREA

(Continued from Page 52)

and only a few of the wells stop for a test.

New Locations

Nine new locations were announced. Two were the Shell's, No. 3-A State, SE cor. NE, Section 32-18-38, and No. 4-A State, SW cor. NE of the same section. Offset locations were made by the Continental Oil Co. in its No. 1-B State, NW cor. SW, Section 33-18-38, and the Landreth Production Co. in its No. 1-B State, SW cor. NW, Section 33, all being 330 feet back from the lease lines. The Gypsy Oil Co. made a location for its No. 2 Grimes, NE SE NW, Section 32-18-38, an offset to Shell and Amerada wells. George F. Getty, Inc., made two locations in the NE, Section 30-18-38, its No. 4 McKinley being spotted in the NW cor. NE and its No. 5 McKinley in the NE cor. NE of the section. These will probably call for six more wells as offsets, four by the Shell and one each by the Amerada and Humble. The Amerada Petroleum Corp.'s No. 1 McKinley, and Ohio Oil Co.'s No. 3 No. 3 McKinley, SW NW NW, Section 30-18-38, one location to the south of its State-Northrup, NE cor. SE, Section 32-18-38, are the other locations.

Routine operations include the following:

Midwest Refining Co.'s No. 1 State, NE cor. NW, Section 10-19-38, is bottomed at 4,000 feet where the 8¼-inch was cemented, and is drilling out plug. The Texas Production Co.'s No. 1 Selman, NW cor. SE, Section 15, is drilling at 2,230 feet in salt and potash. Top of the salt was at 1,728 feet and elevation 3,590 feet. Midwest Refining Co.'s No. 13 State, SE NE NW, Section 15, an offset on the west to Prairie's No. 2 Crump, a completion, is bottomed at 4,170 feet in lime and flowing by heads. It is being tested. The pay was at 4,110-63 feet and it looks like a good well. Midwest's No. 8 State, C NW NW, Section 10-19-38, is standing at 1,543 feet with the 10¾-inch cemented. Atlantic Oil Producing Co.'s No. 1 State, NE cor., Section 6-19-38, is rigging up. Sun Oil Co.'s No. 1 McKinley, C NE NE, Section 5-19-38, is drilling at 3,153 feet in anhydrite and had an oil show at 3,137-42 feet.

Wider Spacing

Midwest Refining Co.'s No. 34 State, SW SE NW, Section 4-19-38, is an abandoned location, its No. 26 State, for which cellar is being dug, taking its place, being a 660-foot location in the C SE NW of the section, the purpose of the change being to conform to the wider spacing of wells being adopted in this immediate vicinity. Midwest's No. 26 State, C SE SE, Section 4, cemented the 10¾-inch at 1,583 feet, and its No. 3 State, NW NE SW, Section 4, cemented 12½-inch at 250 feet. Same company's No. 8 State, C NW NW, Section 4, is bottomed at 2,788 feet in anhydrite and lime and is killing gas to drill deeper. Top of the brown lime was at 2,775 feet. Midwest's No. 33 State, SE SW NW, Section 4, is rigging up. Texas Production Co.'s No. 1 McKinley, NE NW SW, Section 4, is drilling at 1,440 feet, and Midwest's No. 33 Byers, cemented 8¼-inch on bottom at 3,259 feet. Before cementing it tested 120 bbls. of oil per day. Hobbs High, Inc.'s No. 1 Tatum, NW SW SW, Section 35-18-38, is shut down at 2,500 feet.

Ohio Oil Co.'s No. 2 State-Northrup, C SE SE, Section 32-18-38, spudded on June 18 and is drilling. Gypsy Oil Co.'s No. 1 Grimes, NW cor., Section 32, is setting pipe at 3,850 feet, and Shell Petroleum Corp.'s No. 2 State, NW SW NE, Section 32, is drilling at 3,255 feet. It topped the brown lime at 2,755 feet. Empire Gas & Fuel Co.'s No. 1 Fowler, NE cor., Section 31-18-38, is drilling at 3,900 feet in lime. The base of the salt was at 2,540 feet and elevation is 3,644 feet.

Oil and Gas Show

Amerada Petroleum Corp.'s No. 1 McKinley, NW cor., Section 30-18-38, is coring in lime at 4,040 feet. It had an oil and gas show at 4,000-20 feet. Humble Oil & Refining Co.'s No. 2-A Bowers, NW cor. SE, Section 30-18-38, stopped at 3,254 feet in anhydrite to test oil shows at 3,161 and 3,188-3,208 feet through the 4-inch drill pipe. It made 80 bbls. of 40 gravity oil in 24 hours. The same company's No. 4 Bowers, SE cor., Section 30, is drilling at 2,713 feet. It topped the salt at 1,605 feet and bottomed it at 2,520 feet, elevation is 2,646 feet. Humble's No. 5 Bowers, NW NE SE, Section 30-18-38, is shut down at 2,750 feet, and its No. 6 Bowers, NE cor. SE, Section 30, is drilling at 2,545 feet in salt, the top being at 1,596 feet. George F. Getty, Inc.'s No. 1 McKinley, SW cor. NE, Section 30, is standing at 3,856 feet with the 7-inch cemented on bottom, and its No. 2 McKinley, SW SE NE, Section 30, is fishing at a total depth of 3,743 feet. It had a show of gas at 3,713-19 feet. Getty's No. 3 McKinley, SE cor. NE, Section 30, is drilling at 500 feet after cementing the 12½-inch at 212 feet. Amerada Petroleum Corp.'s No. 2 McKinley, SE cor. NW, Section 30, is drilling out plug after cementing the 7-inch at 3,751 feet. Ohio Oil Co.'s No. 1 State, NE cor. SW, Section 30-18-38, is drilling at 3,715 feet in anhydrite and lime.

Continental Oil Co.'s No. 1-A State, SE NW SE, Section 29-18-38, is digging cellar, and the Humble Oil & Refining Co.'s No. 3 Bowers, SW cor., Section 29-18-38, is shut down at 2,750 feet. Humble's No. 7 Bowers, SW cor. NW, Section 29, also is shut down at 2,750 feet. California Co.'s No. 1 Grimes, NW SE SE, Section 29-18-38, is drilling at 3,500 feet. It had a show of oil at 3,152-62 feet and an increase at 3,210-18 feet. Tidal Oil Co.'s No. 1 Grimes, SW NE SE, Section 29, cemented casing at 3,826 feet.

The Texas Pacific Coal & Oil Co.'s No. 1-G State, SE cor., Section 24-18-37, is drilling at 3,924 feet, and Texas Production Co.'s No. 1-C State, NE cor., Section 25-18-37, is drilling at 3,250 feet. The last named topped the brown lime at 2,815 feet and had a show of oil at 2,920 feet. The elevation is 3,664 feet. Landreth Production Co.'s No. 1 State, SW cor. SE, Section 7-18-38, is recementing casing at 3,083 feet.

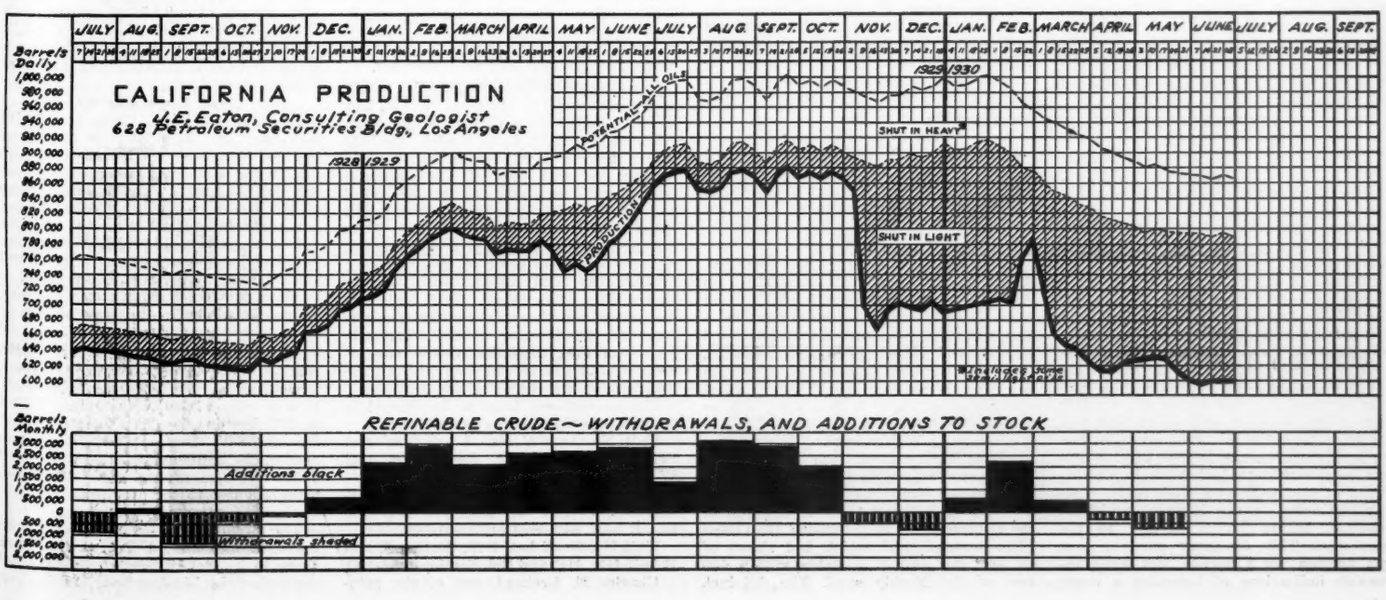
Fisher & Lowrie's No. 1 State, NE cor. NW, Section 11-18-36, 9 miles to the west of the Hobbs Pool, which recently showed for a hole full of oil at 5,199 feet, is being deepened and is drilling at 5,386 feet in lime with 3,000 feet of oil in the hole. The oil is coming from a break at 5,142-54 feet.

Jal Area—Lea County

Midwest Refining Co.'s No. 34 Farnsworth, SW SE SE, Section 13-26-36, is drilling at 2,860 feet in lime. The salt was bottomed at 2,780 feet and lime topped at 2,820 feet, elevation is 2,950 feet. Same company's No. 19 Farnsworth, NW SW SW, Section 14-26-37, is drilling in salt at 1,760 feet. Top of the salt was at 1,255 feet.

Eunice Area—Lea County

The Eunice area in Lea County is showing an increase in activity and there are now five operations. George F. Getty, Inc., is digging cellar for its No. 1 State, NE cor., Section 19-21-36, one-fourth of a mile to the southwest of the Continental



Oil Co.'s No. 1 A. E. Meyers, NE SW SW, Section 17-21-36, which gauged 1,300 bbls. a day initial production upon being completed at 4,001 feet last December. Atlantic Oil Producing Co.'s No. 1 Coleman, SW NE NW, Section 17-21-36, three-fourths of a mile to the north of the discovery, is rigging up, and Tidal Oil Co.'s No. 1 Coleman, SW cor. NE, Section 17-21-36, is drilling at 2,936 feet in anhydrite. The last named bottomed the salt at 2,800 feet and topped the brown lime at 2,880 feet. The elevation is 3,634 feet. Ohio Oil Co.'s No. 1 State-McDonald, SW NW SW, Section 15-22-36, is drilling at 1,850 feet. Continental Oil Co. has resumed operations on its No. 1 William Meyers, SW cor. NW, Section 28-22-36, after the contractor had abandoned the hole. It is bottomed at 3,750 feet and fishing for tools at 3,610 feet. It has not made any new hole for several months due to a bad fishing job. It had 20,000,000 feet of gas a day at 3,375 feet.

Maljamar Area—Lea County

Maljamar Oil & Gas Co.'s No. 3 Baish, SE NE NW, Section 21-17-32, is drilling at 4,050 feet.

Eddy County

Pueblo Oil Co.'s No. 5 Russell, SW cor. NW, Section 18-17-31, in the Maljamar area, has been completed as a fair well at 3,547 feet. R. D. Compton's No. 2 Compton, SW SE SE, Section 5-18-27, a new location, is rigging up.

McKinley County

Walker Dome Oil Co.'s No. 1, Section 14-15n-10w, on the Walker structure, 22 miles north of the town of Grants and south of the Hospah Pool, in the Ambrosia Lake district, is reported to have a good show of oil at 993 feet. The oil is reported to have risen 350 feet in the hole when drilling was suspended to run casing. The sand, which was drilled only 4 inches, has not been identified, but is believed to be either in the lower Mancos or upper Dakota. The oil is reported to be similar to that found at a shallow depth in the Seven Lakes area and to have tested 55 gravity with 65 per cent gasoline. In the Seven Lakes district the shallow wells find the oil at around 350 feet and are good for a few barrels each. The Pitts interests are erecting a small topping plant at Seven Lakes to refine this oil for local consumption and J. Milton Craven and associates are connecting up 11 wells to produce for the Pitts plant.

Valencia County

Acme Development Co.'s No. 1 Santa Fe, SW NW, Section 27-7n-4w, which has been shut down at 4,735 feet in the lower Pennsylvanian, is preparing to resume.

Socorro County

Puertecito Oil Co. is rigging up for a 2,500-foot test to the upper Pennsylvanian in Section 34-4n-6w, on the Mesa Del Oro, or Field structure. The surface is Triassic and igneous rocks are reported to outcrop to the north, east and west.

San Juan County

Southern Union Gas Co.'s No. 1 New Mexican Eagle, SW cor. NW, Section 14-28-11, Kutz Canon district, was completed at 1,750 feet as a 500,000-foot gas well after being shot with 90 quarts. The sand was hard and tight and the well did not equal others in the vicinity.

COLORADO

Moffat County

The Midwest Refining Co.'s No. 24 Hannewalt, NE SE SE, Section 4-6n-92, on the Bell Rock structure, 8 miles southwest of Craig, a rank wildcat started to test the Morapas sandstone, the formation that is the escarpment around the Iles and Moffat Domes, is proving to be an important development. The large flow of gas encountered at 2,843 feet in the base of the Mesa Verde gauged 32,000,000 feet a day with a pressure of 1,050 pounds after drilling through the sand which was 25 feet thick. The gas was then mudded off and drilling towards the objective was resumed. It was bottomed at 2,900 feet at last account and an unconfirmed report is that a showing of green oil has made its appearance in the hole. There has been considerable leasing in the vicinity of this well by several major companies, including the Midwest which is reported taking blocks farther to the northwest. This discovery opens a new gas horizon for Colorado and gives favorable indications of becoming a much more important development than has generally been realized. One structure being leased lies adjacent to Craig. Texas Production Co.'s No. 12 Knowlton, SW SE, Section 33-5n-91, Moffat Dome, is drilling at 3,532 feet. Same company's No. 1 Berlin, SW SW NE, Section 19-12n-100, the discovery well on the Bartram Dome in the Hiawatha district, is being completed as a gas well at a total depth of 2,654 feet. It had an aggregate flow of more than 70,000,000 feet a day in several horizons. Mountain Fuel Supply Co.'s No. 1 Lasher, NE NE, Section 25-12-101, a mile to the southwest of the discovery, is shut down after plugging back from 2,756 feet to test a sand at 2,110-80 feet. Keoughan & Myers' No. 1 State, SW SW, Section 16-4n-101, Midland Ridge Dome, a Pennsylvanian test, is reported drilling at 1,100 feet. There has been a rumor that this wildcat has had a good show of oil, but confirmation is lacking and it is understood the well is still some distance off the objective. S. H. Keoughan, former president of Continental Oil Co., who is interested in this operation with W. A. Myers, is at the well. The Midwest Refining Co.'s No. 19-SD Parkinson, NW SW NE, Section 22-4n-92, Iles Dome, was completed in the second Morrison sand at 3,462 feet and flowed an average of 9½ bbls. per hour. This is an edge well and an offset on the east to a producer completed some time ago. Mountain Fuel Supply Co.'s No. 1 Musser, C NE, Section 5-11n-97, Powder Wash structure, is drilling at 910 feet.

Routt County

Texas Production Co.'s No. 7 Quaintance-Hocking, NE SE, Section 18-6-86, Tow Creek, is drilling at 1,402 feet.

Jackson County

Producers & Refiners Corp.'s No. 1 Hendershot, SE NE, Section 2-6n-81, Pole Mountain, is cleaning out to recement the 8¼-inch casing at 4,006 feet. This wildcat is supposed to be on top of a sand in the Frontier and was reported as having had a show of gas. Midwest Refining Co.'s No. 21-X Rich, SW NW, Section 9-6n-80, Buffalo Creek, is in hard lime at 3,900 feet, at which depth the 8⅝-inch casing was cemented.

Rio Blanco County

Magnolia Petroleum Co.'s No. 1-A Fordham, NW SW, Section 9-2s-96, Piceance Creek, is drilling at 4,750 feet in brown shale and carrying the 6¼-inch. Texas Production Co.'s No. 1 Potter, NE SW, Section 30-2n-96, White River, is still testing horizons below 5,455 feet. On June 19 it was opened for 20 minutes and the gas showed 1,500 pounds pressure and the well made half a barrel of oil. Later in the day it again was opened for 20 minutes and showed a pressure of 1,700 pounds and during the last five minutes blew oil and cotton seed hulls. The same performance was repeated the next day. The well was drilled with a rotary to 5,984 feet when the tools were lost and before abandoning it was decided to run a 2½-inch tubing and set packer at 5,455 feet to test everything below that horizon. The performance indicates there is still a prospect of its cleaning itself and becoming a commercial producer.

La Plata County

The Detroit Oil Association's No. 1 Olbert, NW SW, Section 9-35-12, Thompson Park district, is preparing to resume at 2,660 feet after being down for a few weeks.

Larimer County

Continental Oil Co.'s No. 3 Scott, SW SE, Section 6-9-68, Wellington Dome, an old well being deepened, is drilling at 4,390 feet. Donahoe & Babcock's No. 1 Maxwell (formerly carried as Agnew and others), SE NE NE, Section 25-8n-70, Bellvue structure, spudded in a 15-inch hole and is drilling at 110 feet. First water was struck at 5 feet. This is to be a Pennsylvanian test.

Weld County

Platte Valley Petroleum Co.'s No. 1 Patterson, SW SW, Section 24-6n-61, Greasewood Dome, is drilling at 6,300 feet and is believed to be in the top of the Benton shale. It is through the Codell (Nio-Benton) sand which had shows of oil and gas, and is probably within 400 feet of the Muddy sand. The 4¾-inch casing is being lowered to bottom. It is already deeper than Northeastern Colorado Oil Co.'s No. 1 State, SW cor., Section 36-8n-55, on the Willard Dome in Logan County, farther east, which was drilled to 5,612 feet in 1928 when it ran out of hole. The Willard well topped the Dakota at 5,208 feet.

Morgan County

Indian Territory Illuminating Oil Co.'s No. 1 State, NE NE, Section 16-1n-57, Fort Morgan anticline, is drilling at 1,865 feet.

Washington County

Middlemist Oil Co.'s No. 1 Middlemist, SW SE, Section 14-4s-56, has resumed drilling after being idle for several months and is making hole at 1,150 feet.

Douglas County

Perry Park Oil Co.'s No. 1 Cannon (Christiana and others), SE NW, Section 11-9s-68, which is to test the Pierre shale down to the Niobrara and around which several of the major companies have spreads, is drilling at 460 feet.

Baca County

The A. R. Jones Oil & Operating Co.'s No. 1 Boice Cattle, NW NE, Section 22-34-42 (Tract 50), is drilling at 1,035 feet.

Fremont County

Donnelly Brothers' No. 2 McCandless, NW NE NW, Section 21-20-69, South Florence Field, an operation not heretofore reported, is drilling at 1,800 feet.

Huerfano County

The Ojo Exploration Co.'s No. 1, Section 5-29-69, is bottomed at 151 feet where it has a show of oil and gas and is preparing to set the 6¼-inch casing and make a test. This company, composed of Denver and southern Colorado men, is exploring the area around the Ojo oil seep which has been yielding small quantities of green paraffin base oil, supposedly from the Pennsylvanian formation, for the purpose of determining the significance of the seep and its origin.

WYOMING

The Oregon Basin structure in Park County, Wyoming, which has been producing black oil from the Embar-Tensleep series for the past two years from patented and leased lands, is to be opened for full development as a result of the settlement of controversy pending for several years over a large area claimed by the Oregon Basin Oil & Gas Co., and a decision of the Department of the Interior through Secretary Wilbur to offer for sale at public auction three units comprising 1,320 acres. This auction will take place at the Cheyenne land office August 8 under Section 17 of the general leasing act of February 25, 1920, and it will be the first auction sale of government leases in Wyoming since the Salt Creek Field was opened under the leasing act 10 years ago. Most of the land affected by the settlement of the title situation and that to be sold by the Government is on or near the top of the north and south domes and will require the drilling of several offset wells. Not only is an increase in drilling operations expected to result, but some strong competitive bidding at the sale may be looked for.

The Oregon Basin Oil & Gas Co., which is now controlled by the Ohio Oil Co., had claims pending for a number of years on 1,600 acres filed upon under the old placer mining laws before the general leasing law was enacted. Congressional action was necessary to afford relief and on June 25 Congress passed a bill sponsored by the late Senator F. E. Warren giving the company a preferential right to lease 800 acres at 12½ per cent royalty, the land selected being mostly on the apex of the south dome. This settlement paved the way for the Department of the Interior to offer for sale leases on the remainder of the government land. These two actions open all the land on the structure for development.

The government land to be offered is divided into three units as follows:

Unit No. 1—SW NE S half NW and SE, Section 29; NE, Section 30, and W half W half, Section 33-51n-100.

Unit No. 2—NE, Section 5-51-100; E half SE, Section 31, and SW NW SE and S half SE, Section 32-51-100.

Unit No. 3—N half SW, Section 5, and E half NE, NE and SE, Section 6-51-100.

Charles E. Orchard, one of the principal operators in the field, the Lenco Petroleum Co., the Texas Production Co. and the Ohio Oil Co. all have acreage offsetting the area to be offered for sale and a number of producing wells have been drilled along the lease lines. The leases to be sold are similar to Class B leases under the leasing act and will provide for a sliding scale of royalties. It is expected there will be spirited bidding for the leases and there is a probability that undisclosed interests which now have no holdings in the field will put in bids. Unless some arrangement is made for the successful bidders paying the government a compensating royalty, it is probable considerable offsetting will result. The 800 acres secured by the Oregon Basin Oil & Gas Co. lies just to the west of the tracts to be offered for sale by the Government.

Park County

The Texas Production Co.'s No. 1 Freeman, C NW SE, Section 30-51-100, Oregon Basin, is drilling at 3,267 feet. California Exploration Co.'s No. 2, NW NE, Section 14-48-102, Pitchfork Dome, is drilling at 3,381 feet. Continental Oil Co.'s No. 26 Elk 2, SE NE, Section 24-58-100, Elk Basin Field, is drilling at 550 feet. In the south extension, Henderson Production Co. is ready to spud in its No. 6, SE, Section 31-58-99. The Local Oil Co.'s No. 7 Tendolle, SW, Section 32-58-99, is drilling at 540 feet, and the Elk Basin Syndicate's No. 1 Johnson, NE SE, Section 6-57-99, is shut down for casing at 2,417 feet. Resolute Oil Co.'s No. 1 Badger Basin, SW NE, Section 17-57-101, is drilling at 5,760 feet, and T. N. Clark and others' No. 2, SE SE, Section 11-49-102, Spring Creek structure, is drilling at 4,110 feet. This well was a small producer in the Embar-Tensleep and is being deepened to the Madison lime. Midwest Refining Co.'s No. 31 Frannie Oil, SW NE, Section 25-58-98, Frannie Dome, is standing at 2,050 feet in the red beds with the 10¾-inch cemented, and its No. 31 Rosenberg, SW SE, Section 24-58-98, is drilling at 1,880 feet in black shale.

Hot Springs County

Midwest Refining Co.'s No. 8 Weeks, NW SE, Section 6-44-98, Wagonhound, is drilling in the Sundance sand at 2,200 feet, and Gebo Consolidated Oil Co.'s No. 1, SW SW, Section 23-44-95, Gebo Dome, is coring below 1,335 feet. Ohio Oil Co.'s No. 1 Smith, SE NE, Section 9-46-99. Walker Dome, is recementing at 4,403 feet.

Big Horn County

Producers & Refiners Corp.'s No. 3 Government, joint with the Kinney-Coastal Oil Co., NW NW, Section 24-56-98, is bottomed at 4,234 feet and is bailing hole after cementing the 4¾-inch at 4,183 feet. Ohio Oil Co.'s No. 1 Union Gas, NE cor., Section 22-56-97, Byron Dome, is standing at 5,286 feet after erecting tanks and getting ready to drill in. The same company's No. 1 Easton, NW NW, Section 33-56-97, joint with the Utah Southern Oil Co., is drilling at 3,727 feet in lime. It was in the Madison at 3,704 feet and showing gas and some saturation.

Salt Creek District

Midwest Refining Co.'s No. 29-DT, NW, Section 35-40-79, the Salt Creek test to the granite, is bottomed at 4,605 feet in the Madison lime and underreaming the 6⅝-inch casing. A large volume of hot water in the top of the Madison has been shut off. Wyalta Oil Co.'s No. 4 Smith, Section 11-38-78, east of Teapot, has been completed as a small well at 960 feet, and rig is being moved to location for No. 5 Smith near the withdrawal boundary in the same section.

Natrona County

Midwest Refining Co.'s No. 11 Middy, NE NE, Section 23-35-79, Midway Dome, is drilling at 4,282 feet in black shale. It was turned over to the rotary drillers at 212 feet on May 22. Chicago Oil Co.'s No. 3, SW, Section 1-33-83, Poinson Spider, is bottomed in the Amsden at 3,080 feet and preparing to run casing. This is a test to the Madison.

Carbon County

The Producers & Refiners Corp. is going back into an old well on the Ferris Dome in its No. 16, Section 25-26-87, and has pulled the 141-foot liner and is clean-

ing out. Total depth is 2,705 feet and the 8¼-inch is at 2,072 feet. The same company has resumed in its No. 3, SE NW, Section 2-19-88, Hatfield Dome, after being idle for a year, and is drilling in sandy shale at 4,031 feet with the 4¾-inch cemented at 4,012 feet. Producers & Refiners Corp.'s No. 1 O'Brien Springs, Section 11-24-88, is shut down at 1,880 feet, and its No. 8, NE NW, Section 7-26-89, Wertz Dome, is bottomed at 4,150 feet and is drilling out bridge and bailing after cementing the 6⅝-inch pipe at 4,100 feet. A flow of 80,000,000 feet of gas in this well was killed to make it into a test to the Tensleep. Midwest Refining Co.'s No. 31 Eades, SW SE, Section 1-18-78, Dutton Creek, is drilling at 4,520 feet in dark shale. C. E. Bivens and others' No. 1, SW SW, Section 35-13-92, Baggs Dome, is temporarily shut down at 2,300 feet while the crew has gone to Routt County to pull some casing. A show of oil below the gas was encountered in this well just before drilling was suspended.

Fremont County

Producers & Refiners' No. 2 Muskrat, SE NW, Section 33-34-92, is drilling at 2,615 feet in shale and its No. 10, Section 14-32-95, Sand Draw, is drilling at 3,065 feet in the Mowry shale after successfully penetrating for the first time the heavy gas pressure in the Frontier formation. Kinney-Coastal Oil Co.'s No. 1 Dykeman, SE SW, Section 22-3n-1w, Pilot Butte, resumed drilling after changing over from cable tools to electric drive rotary, but made little progress before the bit was lost. A hard fishing job is not anticipated. The well has a big flow of gas in the Muddy and is being deepened to lower horizons. The Texas Production Co.'s No. 1 State, SW SW, Section 36-34-95, Alkali Butte, is drilling at 4,120 feet and nearing the first objective in the Dakota series.

Sublet County

California Petroleum Corp.'s No. 5-E, Section 27-27-113, La Barge Field, was completed as a 40-bbl. well at 1,001 feet. Circle Oil Co.'s No. 2 Elkhorn Oil, NE, Section 17-27-113, is resuming after being idle for more than a year. It will go back from 1,015 feet to 700 feet and ream the hole.

Sweetwater County

The Hidden Treasure Oil Co.'s No. 1, SW cor., Section 32-21-103, in the northern part of the North Baxter gas field, is reported to have a flow of 5,000,000 feet of wet gas in the top of the Frontier at an unnamed depth. The gas in the wells farther to the south is all dry gas. Mountain Fuel Supply Co. is starting another well on the South Baxter Basin Dome in its No. 2 State, Section 16-16-104, which is spudding at 100 feet.

Lincoln County

Midwest Refining Co.'s No. 1 Larcher, SE SE, Section 25-37-117, Little Grays River, is drilling at 2,380 feet in black shale.

Weston County

Osage-Wyoming Oil Co. is rigging up for a test in the SE cor. NE, Section 25-46-64, Osage district, which is an interesting location. It will redrill a location where a well was abandoned in 1925 as unprofitable. Tom Don's No. 4, NW SE, Section 20-46-63, is drilling at 600 feet, and Dornacher and others' No. 2, SE SE, Section 12-46-64, is drilling at 520 feet. M. K. Mouser's No. 1 Bock, NW cor., Section 2-46-64, is drilling at 550 feet, and the Osage-Wyoming Oil Co.'s No. 1 Witzell, NE NW, Section 30-46-64, is drilling at 1,300 feet. Lambie Oil Co.'s No. 1 Bock, SW cor. NE, Section 14-46-64, is drilling at 1,560 feet, and the Osage Trust Co.'s No. 5, NW cor., Section 13-46-64, is drilling at 1,300 feet. Wesco Oil Co.'s No. 6 Fee, NW NE SE, Section 13-46-64, is rigging up, and Omaha Syndicate's No. 3, NE SW NW, Section 8-46-63, is drilling at 200 feet.

IDAHO

The Public Utilities Consolidated Corp., which distributed manufactured gas in Pocatello and Alameda, has notified the State Public Utilities Commission that it will appeal to the supreme court its recent decision granting a permit to L. B. Denning and John McFayden to extend the Western Public Service Co.'s natural gas system from Ogden, Utah, into southern Idaho. The utility company intervened in the hearing on the permit on the ground that its investment will be jeopardized if natural gas is introduced in competition with the system it already owns.

The Grand Teton Oil Co.'s No. 1 Blevin, Section 33-5n-44, Teton County, is shut down at 2,800 feet for a string of 6¼-inch casing. Water broke in behind the 8¼-inch, necessitating the running of a new string.

UTAH

The Midwest Refining Co.'s No. 1 Pary, Section 14-39-1w, Kane County, has repaired damage to the derrick and is drilling below 4,038 feet. Several shows of oil have been encountered in the past 200 feet in the Kaibab lime. The Diamond Oil Co.'s No. 4, Section 16-8-5e, Utah County, is drilling at 2,100 feet after making a water shut-off with the 8¼-inch at 2,053 feet.

ROCKY MOUNTAIN PRODUCTION

Daily average pipe line runs from the various pools in the Rocky Mountain area for the week ending July 5:

WYOMING	
Salt Creek	33,310
Frannie	320
Big Muddy	2,020
Oregon Basin	6,000
Dutton	50
Elk Basin	820
Byron	10
Warm Springs	110
Lovell	20
Ferris	20
Grass Creek	2,270
Hamilton	790
LaBarge	2,020
Lance Creek	130
Lost Soldier	880
Osage	880
Poison Spider	120
Rock River	2,160
Simpson Ridge	50
Teapot Dome	30
Dallas-Derby	240
Hudson	260
Cody	150
South Casper	620
Total	53,280
MONTANA	
Cat Creek	1,150
Kevin-Sunburst	5,840
Pondera	2,000
Lake Basin	70
Border	100
Total	9,160
COLORADO	
Moffat	1,244
Fort Collins	1,187
Florence	510
Iles	1,224
Tow Creek	395
Boulder	25
Rangley	50
Total	4,635
NEW MEXICO	
Hogback	470
Rattlesnake	1,389
Table Mesa	100
Artesia	844
Cap Rock (Maljamar)	1,001
Jal	1,483
Hobbs High	24,147
Getty	....
Lea City	5,450
Miscellaneous (Lea County)	383
Total	35,267
Grand total	102,342
Week ending June 28	89,014
Increase	13,328

MONTANA

The River Dome Oil Co., drilling in the Cat Creek Field, Petroleum County, reached the Stray sand at 365 feet and found a showing of oil estimated good for 10 bbls., but the well will continue drilling. It is thought this showing at 365 feet comes from some well in the field that permitted oil to come up into the shallow Stray sand and then permeate this shallow horizon. The River Dome Oil Co.'s well is an offset to one of the largest wells in the Cat Creek Field and production is expected in the Kootenai sand.

Mid-Continent's No. 2 is probably the best well in the Border Field. This well is on the Montana side and started with a production around 40 bbls. per hour. It is estimated at 500 bbls. when it settles down. Two wells should reach the pay on the Montana side the coming week; the Cosmos well is drilling at 2,140 feet and the Dakota-Montana well is at 2,400 feet with the pay expected around 2,500 feet.

The Railroad Commission's report of pipe line runs for April was made public last week. Sunburst ran 196,743 bbls.; Pondera made 63,554 bbls.; Cat Creek made 35,968 bbls, making the total production from these three fields 296,266 bbls. for the month of April.

DRILLING PEAK PASSED AT OKLAHOMA CITY

(Continued from Page 29)

been set upon the surface of the channel in most cases, but during heavy rains trouble has been encountered due to water accumulating back of the dikes already built through this section.

With a knowledge of what might happen to derricks and other equipment erected in this river channel if this quicksand became fully saturated with water the Phillips Petroleum Co. has worked out a new type of concrete foundation and actually supports it upon the bed rock 50 feet below the surface of the ground.

The accompanying sketch shows the principal items of this type of foundation. The use of the caisson to sink the cellar to a depth of about 18 feet below the surface has been a determining factor in making this type of installation possible.

Dealing With the Quicksand

In the December 19, 1929, issue of The Oil and Gas Journal on page 43 an article about a system of water development methods devised by E. M. Carter, mining and hydraulic engineer of Austin, Tex., describes different ways of sinking wells or shafts through quicksands for the purpose of developing water supplies. Mr. Carter has been retained by the Phillips Petroleum Co. to supervise the digging of cellars and runways for its derrick locations. He has dug one water well that at a cost of less than $1,000 is now providing the company with sufficient water for 30 drilling operations.

In sinking the caisson below the quicksand level in the river channel locations Mr. Carter follows his method developed in digging wells for water, and L. B. Holland, field superintendent for the Phillips Petroleum Co. for the Oklahoma City Field, has developed the other details to provide derrick foundations which they consider necessary to support their rigs in this type of ground.

After the caisson has been sunk to about 18 feet below the surface and the quicksand removed from inside it the next operation is to dig the manway and vent openings from the surface into the cellar. This work presents difficulties also, for the bottom of the manway is below the water level in the sand and if care is not used in digging it cavities will be made around the trench and caisson and later caving may take place.

When the cellar and runway and vent excavations are completed an inner shell is lowered inside the caisson and the space between the caisson and this inside form filled with concrete. The walls of the trenches for the manway and gas vent are lined with concrete. All concrete is reinforced with old sucker rods that have been burned clean of all grease and oil and present a good surface to the concrete mixture.

Casing Supports

The four 12-inch casing supports inside the cellar and extending to bed rock are placed before the concrete for the bottom of the cellar is poured so that the inside of the 12-inch casing is also filled with concrete. The 20-inch surface pipe is also in place when this concrete is run, so when the job is finished the lined cellar is practically supported on the four strings of 12-inch casing filled with concrete and resting on the bed rock about 50 feet below the surface.

It is also Mr. Holland's idea to drive four other 12-inch casings to bed rock under each of the corners of the derrick foundation and permit them to extend above the 24-inch monolith that forms the base for the derrick a sufficient height to permit reinforcing rods to be passed through holes burned in the upper end of the 12-inch pipe. When the concrete piers for the derrick corners are poured over the upper ends of these 12-inch piles and their reinforcing rods and the monolith is finished the derrick is also carried directly upon the long concrete-filled casings resting on bed rock.

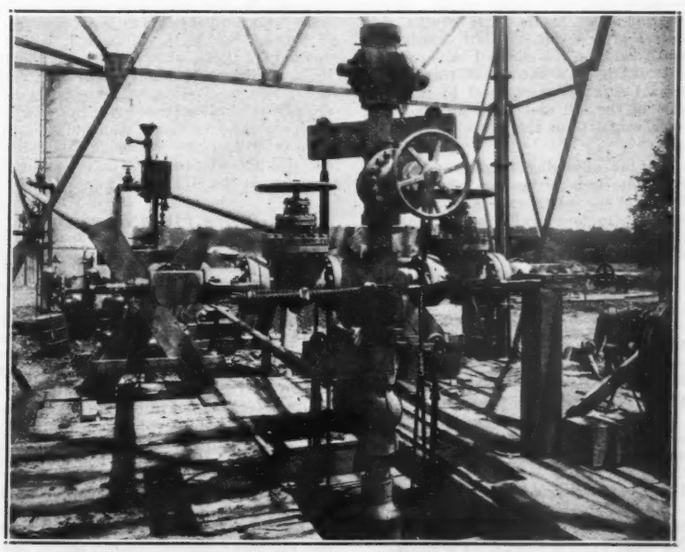
This may seem an elaborate method of providing derrick foundation, but when it is remembered that drilling a well in this area costs upward of $175,000 and that there is no telling when heavy rains may flood the bottoms along the Canadian River and saturate the sands completely, converting them into quicksands that move and shift under vibration and pressure, the wisdom of actually tying the foundations to the bed rock 50 feet beneath the river surface is recognized.

Telephone Poles Used

Some operators drive telephone poles into the sand 25 or 30 feet and use from five to seven piles for each derrick corner. This piling is driven until penetration into the sand stops and then the upper end is sawed off leaving from 6 to 10 inches projecting above the surface. The concrete is then poured around and over the upper ends of these piles and the piers for the derrick corners are elevated above the general level of the 10 to 12-inch slab of concrete cast to form the derrick base.

Cellars in such rigs are dug down to water level, that is from 10 to 12 feet below the surface of the ground. They are cemented and the bottom is carried on four wooden piers driven into the sand.

The essential difference between the two methods is that in the type of foun-



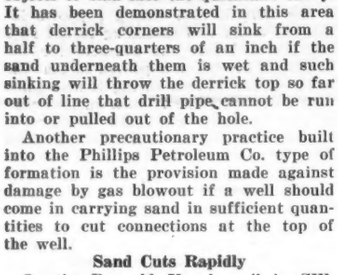
Surface hookup on I. T. I. O. Co.'s No. 1 Elizabeth Trosper well used in "washing-in." Equipment consists of Wescott valves, Shaffer control gate, high pressure nipples and clamps.

dation used by the Phillips Petroleum Co. the 12-inch casings rest on bed rock and even if the sand around them moves it is not believed that any movement will be transmitted to the derrick monolith foundation. The wooden piles are merely driven into the quicksand and it is well known that vibration transmitted through this loose type of formation will cause objects to sink into the quicksand easily. It has been demonstrated in this area that derrick corners will sink from a half to three-quarters of an inch if the sand underneath them is wet and such sinking will throw the derrick top so far out of line that drill pipe cannot be run into or pulled out of the hole.

Another precautionary practice built into the Phillips Petroleum Co. type of formation is the provision made against damage by gas blowout if a well should come in carrying sand in sufficient quantities to cut connections at the top of the well.

Sand Cuts Rapidly

On the Reynolds-Unruh well in SW. Section 1-11-3w, sand cut through the drilling nipple and a casing clamp in about 14 minutes as shown in the accompanying picture and this gives some idea of the cutting force of this material. It was stated by an engineer who examined this sand that it was so fine that



This drilling nipple and clamp were cut through with sand in about 14 minutes. Reynolds and Unruh's No. 1 Reynolds-Evans.

it could hardly be felt when rubbed between the fingers. Apparently it is very fine material washed out of the producing formation by the gas and oil and is carried out of the well at velocities about equal to those of the gas at the discharge end of the flow string.

On one location in the river channel the operator is building a foundation for his boilers by filling a cribbing about 50' x80' with sand. This box when filled will place the boilers above normal high water. It is a novel way of overcoming troubles that have been experienced in this area when boilers are set directly on the surface of the river channel, even though this may be quite dry during low water periods.

Slush pits in the river area are costly to build and take many forms. At one location close to the edge of the river cannel area where the hill forming the south bank of the channel extended over onto the lease a battery of tractors and special scrapers were used to cut down part of the hill and build up dikes that later would form the banks of the slush pit.

On the adjoining location nearer the river pits were being dug below the surface and the earth excavated was being piled up to form walls for the pits. In this operation about 50 head of mules and horses were being used with scrapers.

Where shallow pits are dug into what is now dry sand it is possible that under conditions of high water in the river channel the mud will be diluted with seepage water entering these pits and it will make it difficult to maintain weight in the rotary mud during such intervals.

Washing-In Methods of Completing Wells

Several wells have been completed recently by using the washing-in practice quite common in the Gulf and Pacific Coast fields and described in detail in Uren's "Petroleum Production Engineering," and also in E. W. Wagy's United States Bureau of Mines technical paper No. 247.

The method used by some operators in the Oklahoma City Field is not as elaborate in details of the equipment at the bottom of the wash pipe as that used on the Gulf Coast. It consists of a string of 3 or 5-inch pipe fitted with a cap at the bottom and about 250 feet of perforated pipe next above this cap. This wash pipe is run to the bottom of the hole and clear water is pumped through it into the mud in the hole. The idea is to dilute the drilling mud and wash it out of the casing around the wash string. As the hydrostatic pressure on the sand is reduced the well will gradually flow and this rate of flow is controlled by valves and control gates at the upper end of the inside string of casing.

This method of bringing in the well can be used with considerable safety but there still remains the danger of sand cutting the connections at the well head if the well is flowed wide open for any considerable length of time and to guard against this it is essential that a rather elaborate Christmas tree hook-up be installed. The producer is naturally going to produce his well wide open for his proration rating and if it is in the high-pressure, loose-sand zone troubles may be encountered during this test period.

New Ordinance Reduces Risks

The new city ordinance is expected to do much to eliminate dangers from such sources for if each operator is required to put up a $200,000 bond against damages, he will be likely to use every safety device known to guard himself against wild wells.

In the south pool things are moving along in a normal way and wells are being produced during their proration periods, while the gas is going to gasoline plants. In some instances proration periods have been skipped because all lease storage was full, but on the whole the pipe lines are handling the oil in a satisfactory manner and it is expected that they will continue to exercise this control over wells drilled in town-lot areas later.

Decline curves on some wells are sharp and with the water encountered in the south end of the field the limits of production there are rapidly being defined. Wells on the west side of the field are smaller than those found nearer to the Arbuckle limestone hill and this also seems to indicate that the limits of production there will soon be defined.

The field therefore has every appearance of having passed its peak in production although it will be an area of major importance for some time to come and only by the strictest enforcement of proration agreements will it be held in control and not become a menace to other fields in the Oklahoma territory.

With the Hobbs area in New Mexico becoming active, many oil field workers are leaving Oklahoma City although sightseers and vacationists are visiting the field daily from all parts of the country, attracted to it by the publicity it has received in the past when large wells were being brought in and some were out of control, but to the oil men it is just another oil pool and is rapidly approaching a condition of stability in drilling and production methods and if the practices already worked out are put into use in the area close to town it should be possible to drill up the producing area without damage to town property or inconvenience to the city dwellers.

FORD GETS FILLING STATION

MARLBORO, Mass., July 5.—Henry Ford has the unanimous approval of the Marlboro city council to operate a gasoline filling station on the Boston Post Road near his Wayside Inn property in Sudbury, in formal action on a petition signed by the motor manufacturer and his wife. The petition aroused minor opposition from other filling station operators in the vicinity, who feared a gasoline price-cutting program, but the opposition was withdrawn when Superintendent Boyer of Wayside Inn, representing the Fords, explained that only two pumps were to be installed as a convenience to motorists wishing to visit the old-time "general store" which Mr. Ford has erected near the inn. The pumps are to be in Marlboro just over the town line from Sudbury.

WILDCAT OPERATIONS IN WEST TEXAS

(Continued from Page 68)

CONCHO COUNTY

Beesley et al's No. 1 S. Waring Est., 1,320 ft. from S and E of A. T. Robinson Sur., Abst. 2,120 ..... Machine.

Turner et al's No. 1 Borsig, 150 ft. from S of NE cor., G. Emmig Sur. 130, 6 mi. W of Paint Rock ..... Shut down 735 ft.

CRANE COUNTY

Cranfill Bros. and Gulf's No. 1 J. B. Tubb, 2,310 ft. from N and 330 ft. from E of Sec. 8, Blk. B-27, Public School Land ..... Show oil 2,995 ft.; shut down 3,921 ft.

Sun Oil Co.'s No. 1 First National Bank, C Sec. 6, J. H. Gibson Sur. ..... Drlg. 750 ft.

CROCKETT COUNTY

Dixie Oil Co. and Amerada's No. 2 Powell, 258 ft. N and 2,349 ft. W of NE cor. of Sec. 42, T.C. Ry., but located in Sec. 52, Blk. BB ..... Location.

Doleman & Moore's No. 1 Perner, 3,135 ft. from N and 1,485 ft. from E of Sec. 36, Blk. 2, I.&G.N. Sur. ..... Spudded and shut down.

Magnolia Pet. Co.'s No. 1 Hoover, 2,310 ft. from N and 330 ft. from E of Sec. 12, Blk. 1, G.C.&S.F.R.R. Sur.. Shut down 5,050 ft.

G. Schaul's No. 1 Bouscour Est., 330 ft. N and 2,310 ft. from W of Sec. 27, Blk. HH, G.C.&S.F. Sur. ..... Rig up and shut down.

CULBERSON COUNTY

Grisham & Hunter Corp.'s No. 1 Garren, 2,310 ft. from S and 330 ft. from E of Sec. 18, Blk. 89, P.S.L. Sur. ... Shut down 2,514 ft.

Kornrumpf et al's No. 1 Garren, 330 ft. S and W, Sec. 15, Blk. 79, Public School Land ..... Drlg. 780 ft.

ECTOR COUNTY

Amerada and Skelly's No. 1-B University, 990 ft. from S and 440 ft. from E line, Sec. 2, Blk. 35, University Land ..... Drlg. 3,540 ft.

C. P. Davis et al's No. 1 Hendricks, C SW. Sec. 46, Blk. 42, Twp. 2s, T.&P.R.R. Sur. ..... Shut down 4,012 ft.

Independent Oil & Gas Co.'s No. 1 Eidson, 1,250 ft. S and 2,144 ft. E of NW cor., Sec. 6, Blk. 44, Twp. 3s, T.&P. Sur. ..... Shut down 3,800 ft.; 1,100 ft. oil in hole.

H. F. Wurtz' No. 1 E. A. Ibbetson et al, 330 ft. from N and E lines of NW, Sec. 16, Blk. 46, Twp. 3s, G.M.M.Br.&A. Sur. ..... Top salt 865 ft.; drlg. 1,775 ft.

T. P. Coal & Oil Co.'s No. 1 McKenzie, 1,650 ft. from S and 330 ft. from E of Sec. 282, Blk. 45, Twp. 2s, T.&P. Sur. ..... Shut down 3,870 ft.; swabbing dry.

Transcontinental Oil Co.'s No. 1 University, 1,650 ft. from N and 440 ft. from E line of Sec. 39, Blk. 35, University Land ..... Top pay 3,589 ft.; shut down 3,700 ft.; swabbing 200 bbls. per day.

R. R. Penn et al's No. 1 Goodman et al, 2,640 ft. N and 330 ft. W of SE cor., Sec. 27, Blk. 44, T.&P.R.R. Sur.. Drlg. 1,800 ft.

Simms Oil Co.'s No. 3 University, 2,310 ft. from N and 330 ft. from W of Sec. 1, Blk. 35 ..... Drlg. 1,175 ft.; top salt 928 ft.

Skelly Oil Co. and Republic Prod. Co.'s No. 1 McKenzie, 990 ft. from S line and 330 ft. from E line of Sec. 28, Blk. 45, Twp. 2s, T.&P. Sur. ..... Top pay 3,665 ft.; increase 3,685 ft.; shut down 3,750 ft.; averaging 24 bbls. per day flowing twice each week.

Skelly Oil Co. et al's No. 1-C University, 2,310 ft. from N and W of Sec. 2, Blk. 35 ..... Location.

Sunray Oil Co. et al's No. 1 Jones, 2,330 ft. from N and 440 ft. from E of Sec. 6, Blk. 44, Twp. 3s, T.&P. Sur.. Drlg. 3,550 ft.

The Texas Co. et al's No. 8 Connell, 330 ft. from S and 440 ft. from E of Sec. 2, Blk. B-16 ..... Drlg. 960 ft.; top salt 934 ft.

EL PASO COUNTY

Lane-The Texas Company's No. 1 Malone, 2,110 ft. from SW and NW of Sec. 46, J. M. Day Sur. ..... Shut down 3,089 ft.

FISHER COUNTY

Cranfill & Reynolds' No. 2 Barrett, 330 ft. from N and W of NE, Sec. 199, B.B.B.&C. Sur. ..... Drlg. 1,500 ft.

Cranfill & Reynolds' No. 1 Cooper et al, 330 ft. from S and 990 ft. from W of Sec. 198, B.B.B.&C. Sur. ... Spudded and shut down.

Cranfill & Reynolds' No. 2 Flannigan, 330 ft. from S and E of W half of Sec. 200, B.B.B.&C.R.R. Sur. .. Drlg. 650 ft.

Mid-West's No. 1 Decker, 330 ft. from S and W of W 80 ac. of N 160, Sec. 8, Richardson Sur. ..... Drlg. 1,945 ft.

Roeser & Pendleton's No. 1 Steele, 660 ft. from N and 440 ft. from W of N half of SW, Sec. 210, B.B.B.&C. Sur. ..... Show gas 1,845-65 ft.; drlg. 2,330 ft.

The Texas Company's No. 1-A Teagarden, 150 ft. from S and 420 ft. from E of Sec. 8, Richardson Sur. ..... Drlg. 2,375 ft.

GAINES COUNTY

Humble Oil & Ref. Co.'s No. 1 Carswell, 660 ft. S and E of NW cor. of Sec. 23, Blk. A-27, Public School Land.. Top salt 1,775 ft.; cleaning out 2,700 ft.

GARZA COUNTY

Pandem Oil Corp.'s No. 1 Justice, 330 ft. from S and W of Sec. 12, Blk. 6, H.&G.N. Sur. ..... Spudded and shut down.

Richard's No. 1 Stoker, 330 ft. from N and W, Sec. 2, Blk. 2, G.H.&H. Sur. ..... Top lime 2,366 ft.; total depth 2,500 ft.

GLASSCOCK COUNTY

Associated Oil Co.'s No. 1 Coffee, 2,310 ft. E and 330 ft. from S of Sec. 27, Blk. 33, Twp. 2s, T.&P. Sur. ..... Drlg. 1,235 ft.

California Co.'s No. 1 Jones, 330 ft. S from N and E lines, Sec. 25, Blk. 33, Twp. 2s, T.&P. Sur. ..... Testing show oil 2,516-56 ft.; shut down 3,235 ft.; hole full sulphur water at 3,020-60 ft.

California Co.'s No. 2 Baker, 2,970 ft. S and 1,650 ft. E, parallel to section lines of NW cor., Sec. 33, Blk. 32, Twp. 2s, T.&P. Sur. ..... Fishing 2,160 ft.

Kirby Pet. Co. et al's No. 2 Phillips, 990 ft. S and 2,310 ft. E of NW cor., Sec. 23, Blk. 33, Twp. 2s, T.&P. R.R. Sur. ..... Shut down 2,264 ft.; 1,800 ft. oil in hole; fishing for tools.

Timberlake & Snyder's No. 1 Meek, 2,310 ft. W and 1,600 ft. N of SE cor., Sec. 7, Blk. 34, Twp. 3s, T.P. Sur.... Total depth 2,956 ft.; may drill deeper.

World Oil Co.'s No. 3-C McDowell, 2,310 ft. from S and W of NE cor., Sec. 21, Blk. 34, Twp. 2s, T.&P. Sur.... Drlg. 510 ft.

World Oil Co.'s No. 1 Edwards, 330 ft. from S line and 2,310 ft. from W line of Sec. 13, Blk. 34, Twp. 2s, T.&P. Sur. ..... Top salt 1,490 ft.; shut down 2,420 ft.

HOWARD COUNTY

Cosden Oil Co.'s No. 6 Roberts-A, 200 ft. N and E of SW cor., Sec. 129, Blk. 29, W.&N.W.R.R. Sur. ..... Sulphur water 1,433-46 ft.; shut down 1,456 ft.

McGinley-Sigler's No. 1 Eyman-C, 330 ft. N and 990 ft. W SE cor., Sec. 93, Blk. 29, W.&N.W.R.R. Sur. ..... Location.

Merriwether's No. 1 Smith, 150 ft. from S, 2,490 ft. from W, Sec. 45, Blk. 33 ..... Total depth 2,685 ft.; cleaning out.

Moody Oil Corp.'s No. 23-B Roberts, 990 ft. from N and W of Sec. 137, Blk. 29 ..... Shut down 261 ft.

HUDSPETH COUNTY

Rio Bravo Oil Co.'s No. 1 Southern Pacific right of way, 1,800 ft. N and 1,000 ft. E of Sec. 16, Blk. 72, Twp. 7, T.&P. Sur. ..... Fishing for tools 1,400 ft.

California Co.'s No. 1 University, 3,821 ft. N and 2,554 ft. E of SW cor., Sec. 19, Blk. E ..... Drlg. 4,709 ft.

Western States Oil Co.'s No. 1 Gardner & Moseley, NE NW, Sec. 12, Blk. 18 ..... Fishing 3,155 ft.

IRION COUNTY

Crawford Oil Co.'s No. 1 Williams, 450 ft. from N, 150 ft. from W, Subd. 8 ..... Shut down 1,105 ft.
Cromwell et al's No. 1 Tankersley, 150 ft. from N and 210 ft. from W of E half of Sec. 1,230, G.C.&S.F. Sur... Drlg. 595 ft.
Cromwell et al's No. 2 Tankersley, 200 ft. from N and 150 ft. from W of Sec. 1,219, T.C.R.R. Sur. ..... Drlg. 875 ft.
Kingwood Oil Co. et al's No. 1 J. D. Suggs, SE NW SE, Sec. 19, Blk. 7, H.&T.C. Sur. ..... Total depth 7,818 ft.; plugged back to 3,412 ft.; shot with 10 and 80 qts.; no results; now shut down.
Cromwell et al's No. 3 Nutt, 904 ft. from N and 116 ft. from W of Blk. 6, Gonzales Co. School Land ..... Drlg. 1,310 ft.
P. H. Williams' No. 1 Ash, C of Sec. 20, Washington County ..... Show oil 7,931 ft.; shut down 8,890 ft.; may drill deeper.
Webb et al's No. 1 Nutt, 150 ft. from S and 116 ft. from W of Blk. 5, Gonzales Co. School land ..... Machine.

JONES COUNTY

Gibson & Johnson's No. 1 Hudspeth, 1,125 ft. from N and 483 ft. from E of Sec. 22, Edward Miles Sur. .... Drlg. 2,450 ft.
Shabeen et al's No. 1 King, 6,750 ft. from N and 150 ft. from E of M. Bueno Sur. No. 197. ..... Drlg. 1,227 ft.

KENT COUNTY

White & Smith's No. 1 Pursley estate, 1,320 ft. from E and 2,640 ft. from S of Sec. 8, Blk. H, H.&T.B. Sur... Shut down 273 ft.

LAMB COUNTY

Graham Oil & Gas Co.'s No. 1 Ellwood, CWL, Sec. 9, Blk. T, T. A. Thompson Sur. ..... Shut down 4,428 ft

LOVING COUNTY

Dixie and Phillips Pet.'s No. 1 Johnson, 1,320 ft. from N and E of Sec. 38, Blk. 54, Twp. 2s, T.&P. Sur. .... Shut down 3,378 ft.
Eppenauer et al's No. 1 Allen, 2,310 ft. from NE and NW lines Sec. 90, Blk. 1, W.&N.W. Sur. ..... Building rig.
Lockhart & Co.'s No. 3 Bowen & Wells, 330 ft. from NE and SE of Sec. 92, Blk. 1, W.&N.W. Sur. ..... Shut down 3,383 ft.
Hadlock et al's No. 2 Russell, 1,650 ft. SW of NE line, 2,310 ft. NW of SE line, Sec. 80, Blk. 1, W.&N.W. R.R. Sur. ..... Drlg. 2,950 ft.
Lockhart & Co.'s No. 2 fee, 676 ft. S, 330 ft. W, Sec. 91, Blk. 1, W.&N.W. Sur. ..... Spudded 140 ft.; shut down
Lockhart & Co.'s No. 3 Hubbard, 1,650 ft. from NE line, 330 ft. NW line of Sec. 83, Blk. 33, H.&T.C.R.R. Sur.. Rigged up.
Lockhart's No. 2 Wheat & Ramsey, 440 ft. from NE and 880 ft. from NW Sec. 83, Blk. 1, W.&N.W. ..... Location.
Miller et al's No. 1 Chapman, 225 ft. from NW and 285 ft. from SW line, Sec. 71, Blk. 1, W.&N.W. Sur. ..... Drlg. 600 ft.
Rush et al's No. 1 Wheat, 1,650 ft. from NW and 330 ft. from SW of Sec. 85, Blk. 1, W.&N.W. Sur. ..... Rigging up.
California Co.'s No. 2 Reagan & McElvain, 440 ft. from NW and SW Sec. 84, Blk. 1, W.&N.W. Sur. .... Drlg. 200 ft.
California Co.'s No. 4 Reagan & McElvain, 330 ft. from NE and 1,650 ft. from NW, Sec. 84, Blk. 1, W.&N.W... Cellar.
Lee O. White et al's No. 1 Russell et al, 320 ft. from NW and 2,200 ft. from SW, Sec. 80, Blk. 1, W.&N.W.. Rigging up.

LYNN COUNTY

Lubewell Oil Co.'s No. 1 May, 2,310 ft. S, 2,310 ft. W, Sec. 10, Blk. 7, E.L.R.R. Sur. ..... Shut down 190 ft. for casing
George McCamey's No. 1 Edwards, 165 ft. N and E, Sec. 5, Blk. 2, L.S.&W. Sur. ..... Shut down 5,040 ft.

MENARD COUNTY

Barnett et al's No. 3 Callan City Co., 300 ft. from S and W, Sec. 1, B.S.&F. Sur. ..... Shut down 485 ft.

Panhandle Ref. Co.'s No. 2 Eckhart, 1,320 ft. from W and 1,320 ft. from S of Sec. 10, Blk. 2, T.W.N.G. Sur. ..... Drlg. 1,725 ft.
Priest's No. 1 Sorrel, 1,000 ft. from E and 200 ft. from S cor., Sec. 132, E.L.R.R. Sur. ..... Shut down 2,173 ft.

MIDLAND COUNTY

Pure Oil Co.'s No. 1 Hutt, 2,310 ft. from N and 330 ft. from E of Sec. 14, Blk. 38, Twp. 4s, T.&P. Sur. ..... Drlg. plug 4,120 ft.

MITCHELL COUNTY

Gant & Teas' No. 1 Handley, 330 ft. S and W parallel to section lines of NE cor. of SE, Sec. 12, Blk. 28, Twp. 1n, T.&P. Sur. ..... Drlg. 2,650 ft.
Morrison et al's No. 2 Morrison, 2,310 ft. from N and 660 ft. from E of Sec. 31, Blk. 28, Twp. 1n, T.&P. R.R. Sur. ..... Total depth 3,112 ft.; top pay 3,038 ft.; 1,000 ft. oil in hole; swabbing 40 bbls. in 24 hrs.
Morrison et al's No. 1 Poe et al, 660 ft. S and 1,980 ft. W parallel to section lines of NE cor., Sec. 8, Blk. 27, T.&P. Sur. ..... Spudded 10 ft. and shut down.

PECOS COUNTY

Barnes et al's No. 1 Sanford, 160 ft. from NW and 157 ft. from SW of Sec. 55, Blk. 10, H.&G.N. Sur. ..... Location.
Black et al's No. 1 Pecos Valley Oil Co., 1,120 ft. from SE and 1,420 ft. from SW Sec. 34, Blk. 3, H.&T.C. Sur. ..... Location.
Buell & Hagan et al's No. 1-A Pecos Valley Oil Co., 150 ft. from NW and 1,470 ft. from NE of Sec. 22, Blk. 10, H.&G.N. Sur. ..... Drlg. 1,380 ft.
Crosby Prod. & Ref. Co.'s No. 1 Cordova, 330 ft. from N and E of S 320 ac., Sec. 11, H.&G.N. Sur. ..... Shut down 2,080 ft.
Fisher & Lowrie's No. 1 Webb, C Sec. 3, Blk. 203, Tillman & Walters Sur. ..... Shut down 3,256 ft.
Galt-Brown's No. 1 Neville, 2,265 ft. from E and 764 ft. from S. Sec. 74, Blk. 194, G.C.&S.F. ..... Spudding.
Hayes et al's No. 1 Lea, C NW of NE, Sec. 9, Blk. 106, T.&St. L. Sur. ..... Location.
G. A. Henshaw, Jr., Inc.'s No. 1 University, 1,650 ft. from S and 990 ft. from E, Sec. 32, Blk. 16 ..... Drlg. 470 ft.
Humble Oil & Ref. Co.'s No. 1 Kokernot, 1,320 ft. from N line and 1,467 ft. from W line of Sec. 227, Blk. 10, G.H.&S.A. Sur. ..... Shut down 1,267 ft.
Humble Oil & Ref. Co.'s No. 1 Thompson, 1,980 ft. N and E of Sec. 96, G.C.&S.F. Sur. ..... Spudding.
Russman Oil Co.'s No. 1 Esters, 960 ft. from N and 300 ft. E, Sec. 83, Blk. OW, T.M.R.R. Sur. ..... Shut down 1,680 ft.
Independent O. & G. Co.'s No. 4 McDonald, 155 ft. from N and 2,485 ft. from E, Sec. 46, Blk. 12, H.&G.N. ... Fishing 420 ft.
McCarty Oil Co.'s No. 2 Gray, 2,370 ft. from N and 450 ft. from W, Sec. 591, G.C.&S.F. Sur. ..... Shut down 916 ft.
Messenger et al's No. 2 Byrne, 2,490 ft. from NE and SE of Sec. 54, Blk. 10, H.&G.N. Sur. ..... Shut down 1,367 ft.; top pay 1,364 ft.; flowing 93 bbls. daily.
Messenger et al's No. 1 Butz, 1,820 ft. from NW and 1,170 ft. from SW Sec. 54, Blk. 10, H.&G.N. Sur. ..... Location.
J. R. Miller et al's No. 1 Bennett, 359 ft. W from CWL, Sec. 1, Blk. 119, G.C.&S.F. Sur. ..... Drlg. 1,240 ft.
J. D. O'Mara's No. 1 Bennett, Sec. 592, 1,460 ft. from S, 150 ft. from E, G.&C.S.F. Sur. ..... Top pay 1,089 ft.; well making estimated 5 bbls. oil per day; total depth 1,215 ft.
J. D. O'Mara's No. 1 Streety, C of Sec. 1, W. P. Howard Sur. ..... Show oil 1,785 ft.; shut down 2,200 ft.
Oregon Oil Corp.'s No. 2 Yates, 150 ft. from S and W of Sec. 58, Blk. 1, I.&G.N. ..... Shut down 1,620 ft.

An Announcement

DUQUESNE BURNER SERVICE CO.
and
THE GAS COMBUSTION COMPANY
take great pleasure in announcing that they have become a part of
SWINDELL-DRESSLER CORP.
with offices at Pittsburgh, Pa.

Other companies participating in this consolidation are:
WILLIAM SWINDELL & BROTHERS
and
AMERICAN DRESSLER TUNNEL KILNS, Inc.

The Swindell-Dressler Corporation assures the friends and customers of all of these companies that the same service and co-operation which they have received in the past will be continued undiminished by the new company.

SWINDELL-DRESSLER CORPORATION

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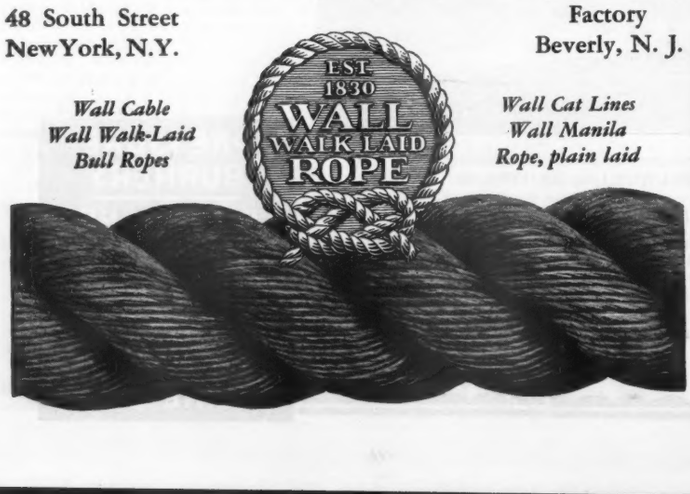


Wall Cat Lines
Wall Manila
Rope, plain laid

Peren Oil Co.'s No. 2 Eaton, C of E of W, Sec. 27, Blk. 3, H.&T.C. Sur. ..... Shut down 1,323 ft.
Perren's No. 1 Jackson, 200 ft. from NW and SW of Sec. 28, Blk. 3, H.&T.C. ..... Fishing 975 ft.
Plymouth Oil Co.'s No. 4 Perry, 300 ft. from N and 420 ft. from E, Sec. 14, Blk. 194, G.C.&S.F. Sur. ..... Cellar.
R. W. Porpus et al's No. 1 State Land, 330 ft. S and W lines of NE, Sec. 28, Blk. OW, T.C.R.R. Sur. ..... Spudded and shut down.
Phillips Pet. Co.'s No. 3 Monroe, 3,860 ft. from N and 1,255 ft. from E, Sec. 39, Blk. 194, G.C.&S.F. ..... Shut down 260 ft.
Pure Oil Co.'s No. 1 Harrison, 2,310 ft. from N and 330 ft. from W of Sec. 203, Blk. 3, T.&P. Sur. ..... Drlg. 445 ft.
Riser & White's No. 1 Riser, 2,297 ft. from S and 997 ft. from E of Sec. 24, Blk. 12, H.&G.N. Sur. ..... Location.
Sides & Cloyd's No. 2 Blackstone & Slaughter, C NW of Sec. 34, Blk. A-2, T.&C.R.R. Sur. ..... Shut down 2,070 ft.
Southern Crude Oil Pur. Co.'s No. 2 Eaton, 2,310 ft. from SW and SE, Sec. 35, Blk. 3, H.&T.C. Sur. ..... Shut down 1,602 ft.; top pay 1,575 ft.; about 10 b.ls. per hour.
California Co.'s No. 1 Fromme, 330 ft. from NE and, NW Sec. 106, Blk. 10, H.&G.N. Sur. ..... Drlg. 865 ft.
California Co. et al's No. 1 Thomas, 990 ft. from NW and SW of Sec. 31, Blk. 34, H.&T.C. ..... Location.
The Texas Company's No. 1 Wright, 660 ft. S and E of NW cor., Sec. 9, Blk. 131, T.&S.T.L. Sur. ..... Show oil 3,460 ft.; total depth 3,484 ft.

Transcontinental Oil Co.'s No. 1 University, 1,980 ft. N and E of SW cor., Sec. 18, Blk. 18, University Land.. Shut down 4,920 ft.
W. F. Walsh et al's No. 1 Scharbaur Cattle Co., 330 ft. S and 990 ft. E from C, Sec. 16, Blk. 136, T.&St. R.R. Sur. ..... Fishing 2,428 ft.
Warner's No. 1 Webb, 2,550 ft. from NW and 6,100 ft. from NE of Sec. 311, Abst. 756, C. McGinley Sur. ..... Location.
Webb's No. 3 fee, 1,900 ft. from W and 223 ft. from S, Sec. 105, Blk. OW, G.C.&S.F. Sur. ..... Location.

PRESIDIO COUNTY

L. C. Brite's No. 4 Brite, 271 ft. from N and 1,188 ft. from E lines of Sec. 245, Blk. 4 ..... Drlg. 2,420 ft.

REAGAN COUNTY

Big Lake Oil Co.'s No. 1-C University, 2,598 ft. S and 250 ft. W of NE cor., Sec. 1, Blk. 2, University Land.. 9,442,000 ft. gas; averaged 799 bbls. per day for last 7 days; total depth 8,668 ft.
Beesley et al's No. 1 Sawyer Cattle Co., 1,320 ft. from N and 3,960 ft. from E, Sec. 8, J. G. Robinson Sur., elevation 2,586 ft. ..... Drlg. 2,150 ft.
Big Lake Oil Co.'s No. 4-C University, 1,120 ft. from N and 1,096 ft. from E of Sec. 1, Blk. 2 ..... Top pay 8,220 ft.; flowing average 70 bbls. per day; total depth 8,220 ft.
Big Lake Oil Co.'s No. 5-C University, 625 ft. from S and 250 ft. from W of Sec. 25, Blk. 9 ..... Drlg. 1,275 ft.; top salt 1,048 ft.
Texon Oil & Land Co.'s No. 3-B University, 2,240 ft. from S, 920 ft. from W, Sec. 36, Blk. 9 ..... Top pay 8,517 ft.; flowing average 125 bbls. per day, 3,600,000 ft. gas; total depth 8,633 ft.
Westyde Investment Co.'s No. 1 Scott, 1,280 ft. N and 1,320 ft. from W, Sec. 177, Blk. 1, T.&P. Sur. ..... Drlg. 2,485 ft.

REEVES COUNTY

H. T. Hansford's No. 1 Williams, 150 ft. from S and W, Sec. 17, Blk. 6, H.&G.N. Sur. ..... Shut down 380 ft.
Black & Fink's No. 1 Brooks, 1,980 ft. N and 660 ft. W, Sec. 16, Blk. 59 ..... Shut down 1,860 ft.; show oil 1,820 ft.; cleaning out after two shots; filled up 200 ft. with oil.
Salsbury & Gregory's No. 1 Young Bell, 1,170 ft. from N and 330 ft. from E of Sec. 7, Blk. 5, H.&G.N. ..... Drlg. 225 ft.
Lee O. White et al's No. 1 Hershersor, 330 ft. from N and W lines of Sec. 5, Blk. 51, Twp. 10, T.&P. Sur.. Show oil 3,410 ft.; shut down 3,575 ft.
California Co.'s No. 1 Kloh & Rumsey, 1,650 ft. from S and E of Sec. 13, Blk. 54, Twp. 4, T.&P. Sur. ..... Drlg. 2,165 ft.

RUNNELS COUNTY

Dutton et al's No. 1 Dean, 5,475 ft. from NE and 1,048 ft. from NW in J. Heil Sur. No. 419 ..... Drlg. 515 ft.
Gibson & Johnson's No. 2 Serratt, 2,310 ft. from S and 1,650 ft. from E of Sec. 150, E.T.R.R. Sur. ..... Derrick.
George W. Boyce's No. 1 Lang, 2,310 ft. N, 6,900 ft. E, Sec. 262 ..... Show oil 2,028 ft.; shut down 2,643 ft.

SCHLEICHER COUNTY

Delmar Oil Co.'s No. 1 O'Harrow, C of NW, Sec. 56, Blk. 1, G.H.&S.A.R.R. Sur. ..... Total depth 4,065 ft.
Interstate's No. 1 Whitten, 1,320 ft. from N and W, Sec. 35, Blk. LL, T.C.R.R. Sur. ..... Drlg. 6,800 ft.; bails from 5 to 10 gals. of 50 gravity oil every 3 to 5 hrs.
Teas & Gant's No. 1 Allison, 1,320 ft. N and E of SW cor. of Sec. 37, Blk. K, G.H.&S.A.R.R. Sur. ..... Running 10-in. casing 2,225 ft.
Wesner et al's No. 1 Nicks, 2,310 ft. from N and 2,362 ft. from E of Sec. 77, Blk. LL, T.C.R.R. Sur. ..... Spudding.
George Wilson's No. 1 Page, Sec. 40, Blk. L, 1,290 ft. from N, 1,470 ft. from W, G.H.&S.A.R.R. Sur. ..... Fishing 4,912 ft.

SCURRY COUNTY

Byrd & Harmon's No. 1 Murphy, Jr., 320 ft. from N and E of Sec. 114, Blk. 97, H.&T.C. Sur. ..... 2,000 ft. oil in hole; total depth 3,320 ft.; fishing bit; top pay 1,750 ft.; swabbed 106 bbls. in 5 hrs.; filled up 600 ft. in 20 hrs. after swabbing.
Camp Spring Oil & Ref. Co.'s No. 3 Guinn, 1,300 ft. from S, 300 ft. from E, Sec. 12, Blk. 3, H.&T.C.R.R. Sur. ..... Shut down 4,367 ft.
Camp Springs Oil Co.'s No. 1 Strayhorn, 330 ft. from S and 1,980 ft. from W of Sec. 154, Blk. 3, H.&G.N.. Location.
I. B. Mimms et al's No. 1 J. J. Koonsman, Sec. 216, Blk. 2, H.&T.C.R.R. Sur. ..... Spudded and shut down.
G. E. Dickman and R. B. Pender et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 2, H.&T.C. Sur. ..... Fishing 4,532 ft.
Transcontinental Oil Co.'s No. 1 Peckham, 330 ft. from S and W of R. N. Miller Sur. ..... Cleaning out; total depth 2,557 ft.

STERLING COUNTY

Mann et al's No. 1 Reed, 330 ft. from N and 2,310 ft. from W, Sec. 16, Blk. 14, S.P.R.R. ..... Spudding.

SUTTON COUNTY

Independent Oil & Gas Co.'s No. 1 Wilson, Sec. 30, Blk. A, 1,650 ft. from N, 2,310 ft. from W ..... Location.

TAYLOR COUNTY

Clark et al's No. 1 Kendall, 250 ft. from N and W of farm in Willis Avery Sur. ..... Spudded and shut down.
Condor Pet. Co.'s No. 1 Stoker, C of NW, Sec. 220, Blk. 64, H.T.C.C.R.R. Sur. ..... Drlg. 3,400 ft.
Gibson & Johnson's No. 1 Bingham, 330 ft. N and E of SW. cor. their 270.8-acre tract, Sec. 31, Guadalupe County School Land ..... Total depth 2,412 ft.; drlg. by pipe.
John B. Jameson's No. 1 Webb, 1,170 ft. S and W of NE cor., Sec. 46, Lunatic Asylum Land ..... Show oil 4,917 ft.; drlg. 5,970 ft.
Hucony Oil Co. et al's No. 1 Richie, C SE Sec. 10, Blk. A, S.P.R.R. Sur. ..... Shut down 1,080 ft.

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett, C NW, Sec. 155, Blk. D, M.-K.-T.R.R. Sur. ..... Drlg. 2,115 ft.
Keck Pecos Trust Co.'s No. 1 Hamilton, C, Sec. 6, Georgetown Ry. Sur. ..... Shut down 3,150 ft.
Miller Bros.' No. 1 Allison & Burke, C NW cor., Sec. 10, Blk. 176, T.&P. Sur. ..... Shut down 120 ft.

Mrs. J. B. McPhees' No. 1 Sam Belt, C, Sec. 17, Blk. D-7, E.L.R.R. Sur. ..... Shut down 880 ft.; moved off machine.

Transcontinental Oil Co.'s No. 1 Goode, 2,152 ft. from E and 330 ft. from S, Sec. 26, Blk. 161, G.C.&S.F.R.R. Sur. ..... Drlg. 4,930 ft.

Woodley & Jones' No. 1 Pankenham, C SE NW, Sec. 43, Blk. B-2, C.C.S.D.&N.G.R.R. Sur. ..... Shut down 640 ft.

TERRY COUNTY

Atlantic et al's No. 1 Carlisle, 990 ft. from S and E of Sec. 58, Blk. E, E.L.&R.R. Sur. ..... Drlg. 4,420 ft.

TOM GREEN COUNTY

Cosden Oil Co.'s No. 1 William Anson, 2,310 ft. S, 330 ft. W of NE cor., Sec. 20, Blk. 24, H.T.C.R.R. Sur. ..... Spudded.

Ellis' No. 3 Lewis, 1,350 ft. S and 450 ft. E of SW cor. Jas. Webb Sur. 77, but in Albert Black Sur. 75 ..... Shut down 485 ft.; show oil 396 ft.

Fitzgerald & Taliaferro's No. 1 Bennett, C SW, Sec. 1,628, E. H. Dinger Sur. ..... Plugged back to 2,405 ft. to straighten hole; shut down 2,447 ft.

Phillips Pet. Corp.'s No. 1 Guiden, 1,250 ft. from N and 1,583 ft. W of Sec. 77, James Webb Sur. ..... Drlg. 3,010 ft.

G. W. Wiley et al's No. 1 Maier, 200 ft. from E, 110 ft. from N, Sec. 6, Blind Asylum Land ..... Show oil 418-20 ft.; total depth 632 ft.

UPTON COUNTY

Cordova Union Land Co.'s No. 1 fee, 330 ft. from S and E line of Sec. 1, Blk. 1, M.-K.-T.R.R. Sur. ..... Location.

Eppenauer Drlg. Co.'s No. 3 Chaney, 1,147 ft. from N and 990 ft. from W, Sec. 18, Blk. 3, M.-K.-T. Sur. .. Total depth 2,265 ft.; fishing for casing.

VAL VERDE COUNTY

A. Bluhm's No. 1 Yoast, 1,760 ft. N, 600 ft. W of SE cor., Sec. 31, Blk. 3, I.&G.N. Sur. ..... Location.

Independent Operators' No. 1 Whitehead, SE SE, Sec. 30, Blk. 4, I.&G.N. Sur., elev. 1,175 ft. ..... Shut down 5,360 ft.

O. O. Owen's No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev. 2,130 ft. ..... Drlg. 5,757 ft.

Phantom Oil Co.'s No. 1 Ingram, 175 ft. W of E line and 300 ft. N of S line, Sec. 33, Blk. D-8, E.L.&R.R. Sur... Show oil 1,525 ft.; fishing 3,035 ft

Valvert Oil Corp.'s No. 1 Bassett, C NE Sec. 47, Blk. Y.. Shut down 4,009 ft.

WARD COUNTY

Atlantic and Delmar's No. 7 Hayzlett, 2,070 ft. from NW and 1,878 ft. from SW, Sec. 17, Blk. 5, H.&T.C. Sur... Shut down 2,520 ft.; top pay 2,484 ft.; shot twice; cleaning out; estimated 40-bbl. well.

Gulf Prod. Co.'s No. 3 Wristen Bros., 220 ft. NE of SW and 220 ft. SE of NW, Sec. 18, Blk. 5, H.&T.C. Sur... Show gas 1,960-70 ft.; filling up with sulphur water 2,520-27 ft., salt water 2,545 ft.; plugged back to 2,477 ft.

R. F. Owens' No. 1 Johnson, 100 ft. from NE and 1,100 ft. from SE of Sec. 8, Blk. 33, H.&T.C.R.R. Sur. ..... Drlg. 500 ft.

Penn and Atlantic's No. 1-B Pecos Mercantile Co., 990 ft. from NW and 2,310 ft. from NE, Sec. 16, Blk. 34, H.&T.C. Sur. ..... Rigging up.

Tex-Oil Prod. Co.'s No. 1 Redman, 1,980 ft. NE of SW line and 1,980 ft. SE of NW line, Sec. 152, Blk. 34, H.&T.C.R.R. Sur. ..... Shut down 5,077 ft.

Richardson's No. 3 O'Brien, 322 ft. from N and 1,680 ft. from W of Sec. 5, Blk. F ..... Drlg. 2,745 ft.; several sands showing oil and gas.

Shipley et al's No. 5 Hayzlett, assume common line Secs. 16 and 17, is N and S, 220 ft. S and 1,910 ft. W, Sec. 17, Blk. 5 ..... Standard rig.

Shipley et al's No. 1 Monroe, 330 ft. SE SW, Sec. 3, Blk. 1 ..... Drlg. 1,545 ft.

J. E. Smith's No. 1 Clement, 152 ft. SW of NE line and 153 ft. SE of NW line, Lot 7, Sec. 7, Blk. 32, H. & T.C.R.R. Sur. ..... Shut down 2,230 ft.; estimated 1,000,000 ft. gas.

Sturm & Paine's No. 1 Cummins, 748 ft. from NE and 155 ft. from NW of Sec. 7, Blk. 32, H.&T.C.R.R. Sur... Total depth 2,350 ft.; shut down

Sun Oil Co.'s No. 1 Sealy, 330 ft. from N and E of Sec. 88, Blk. F, G.M.M.B.&A. Sur. ..... Shut down 2,563 ft.

WINKLER COUNTY

Atlantic & Maxwell's No. 1 Daugherty, 1,650 ft. from S and 2,310 ft. from E, Sec. 16, Blk. 74, Public School Land ..... Rigging up.

A. W. Phillips' No. 2 Brown et al, 2,000 ft. S and W of NE, Sec. 4, Blk. B-5, Public School Land ..... Top salt 1,300 ft.; show oil 2,775-85 ft.; shut down 2,900 ft.

Liner Drlg. Co.'s No. 1 Campbell, 330 ft. from N and E cor., Sec. 2, Blk. B-5 ..... Shut down 3,880 ft.

Shell and The Texas Company's No. 1-B Cowden, 600 ft. from S and W of Sec. 39, Blk. B-5, Public School Land ..... First gas 2,290 ft.; increase 2,580 ft.; total 3,500,000 ft. gas (estimated); moving in rotary; drlg. ly tools 2,852 ft.

Simms Oil Co.'s No. 1 Sealy, C of SE Sec. 49, Blk. F, G.M.M.B.&A. Sur. ..... Drlg. plug 568 ft.

WILDCAT OPERATIONS IN TEXAS PANHANDLE

(Continued from Page 70)

GRAY COUNTY

Amalgamated German-American Oil Co.'s No. 1 Webb, 330 ft. S and W, E½ NW, Sec. 12, Blk. A-9, H.& G.N. Sur. ..... Drlg. 550 ft.

Baldridge & Lilley's No. 1 Melton, 330 ft. N and W, E½ SE, Sec. 95, Blk. B-2, H.&G.N.R.R. Sur. ..... T.D. 3,140 ft; 2,000 ft. oil in hole, estimated 15,000,000 ft. gas 2,918 ft; spraying 25 bbls. oil per day; T.P. 3,133 ft.

Cockrell-McIlroy Oil Co.'s No. 1 Baer, 330 ft. S and W, NE, Sec. 126, Blk. 3, I.&G.N. Sur. ..... Location.

Cockrell-McIlroy Oil Co.'s No. 1 Allam, 330 ft. N and E of E½ of NE¼, Sec. 127, Blk. 3, I.&G.N. Sur. ..... Drlg. 2,050 ft.

Cockrell-McIlroy's No. 1 Horner, 330 ft. S and E, NE, Sec. 139, Blk. 3, I.&G.N. Sur. ..... Spudding.

Continental Oil Co.'s No. 1 Wright, 330 ft. S and W, NW, Sec. 13, Blk. 3, I.&G.N. Sur. ..... Drlg. 1,720 ft.

Danciger O. & R. Co.'s No. 2 Bradford, C SW NE, Sec. 148, Blk. B-2, H.&G.N. Sur. ..... Rigging up.

Danciger O. & R. Co.'s No. 1 Catlin et al, 175 ft. S, 300 ft. E of N 71 ac. of E 231 ac., Sec. 57, Blk. 3, I.&G.N. Sur. ..... S.D. 2,750 ft.

Danciger O. & R. Co.'s No. 5 Morse, 330 ft. N and E, SW SW NW, Sec. 1, Blk. 26, H.&G.N.R.R. Sur. ..... S.D. 2,505 ft.

Empire G. & F. Co.'s No. 1 Crow, 875 ft. N and W, NE, Sec. 137, Blk. 3, I.&G.N. Sur. ..... Fishing 280 ft.

Empire G. & F. Co.'s No. 1 Sailor, 330 ft. S and W, NE, Sec. 138, Blk. 3, I.&G.N. Sur. ..... Building rig.

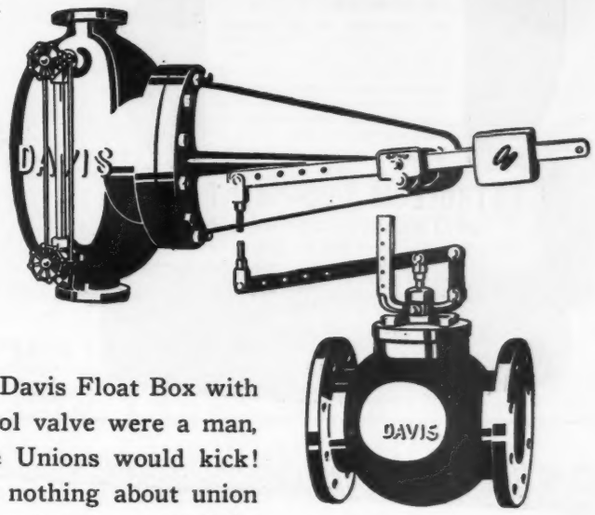
Empire G. & F. Co.'s No. 1 Whittemore, 2,310 ft. N and W, Sec. 14, Blk. 4, I.&G.N. Sur. ..... Location.

Gardner Bros. and Collins' No. 2 Saunders, 955 ft. S, 330 ft. E of W 68 ac., E½, J. G. Eustice Sur. ..... Location.

Humble O. & R. Co.'s No. 1 Young, C SW, Sec. 110, Blk. 3, I.&G.N. Sur. ..... Drlg. 2,480 ft.

Jewell Oil Co.'s No. 1 Harrah, 330 ft. N and W, of W 40 ac., S 120 ac., E 240 ac., Sec. 163, Blk. 3, I.& G.N. Sur. ..... Drlg. 1,675 ft.

How the Unions Would Kick!



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This unit is the acme of simplicity and accuracy. All the control mechanism is outside the tank where it is accessible. Use it as an inlet or outlet control to maintain a given fluid level within a tank.

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General Offices AURORA, ILLINOIS and Factory

LeFlore Pet. Corp.'s No. 1 Wilson, 330 ft. N and E. Sec. 1, B.S.&F. Sur. ..... S.D. 2,490 ft.
Lenix et al's No. 1 Bradford, 330 ft. N and E, W½ SE, Sec. 118, Blk. B-2, H.&G.N.R.R. Sur. ..... 8,000,000 ft. gas 2,400 ft; 7,000,000 ft. gas 2,740 ft; T.D. 3,252 ft; to P.B. for gas.
Lyon et al's No. 2 Morse, 330 ft. S and W, NW NW, Sec. 1, Blk. 26, H.&G.N.R.R. Sur. ..... Drlg. 2,530 ft.
Jean Pet. Co.'s No. 1 Furneaux Bros., 330 ft. N and W cor. SE, Sec. 200, Blk. B-2, H.&T.N. Sur. ..... S.D. 2,050 ft.
Magnolia Pet. Co.'s No. 1 Cubine, 330 ft. N and W, NE, Sec. 36, Blk. 25, H.&G.N.R.R. Sur. ..... 9,000,000 ft. gas 2,325-35 ft.; fishing 2,775 ft.
Magnolia Pet. Co.'s No. 1 Sailor, 990 ft. S, 330 ft. W, E½ NE, Sec. 138, Blk. 3, I.&G.N. Sur. ..... Building rig.
McAuley et al's No. 4 Morse, 330 ft. N and W, SE cor. NE, Sec. 2, Blk. 26, H.&G.N.R.R. Sur. ..... S.D. 2,175 ft.
Midwest Explin. Co. et al's No. 1 Waggoner, 1,320 ft. W, 330 ft. N, Sec. 173, Blk. 3, I.&G.N. Sur. ..... Spudding.
Nelson et al's No. 1 Crews, 330 ft. S and E, NW, Sec. 12, Blk. 25, H.&G.N. Sur. ..... Drlg. 1,020 ft.
Prairie Oil & Gas Co.'s No. 1 Carey, 372 ft. from W and 330 ft. from N of Sec. 114, Blk. 3, I.&G.N. Sur. .... Drlg. 2,450 ft.
Saulsbury et al's No. 1 Sheridan, 330 ft. S and E, W½ NE, Sec. 184, Blk. B-2, H.&G.N. Sur. ..... S.D. 2,290 ft.
W. A. Scott's No. 1 Cobb, 330 ft. S, 425 ft. W, N½ SE, Sec. 184, Blk. 3, I.&G.N. Sur. ..... S.D. 2,270 ft.
Smith's No. 1 Morse, 200 ft. S, 330 ft. W, Sec. 6, Blk. 26, H.&G.N. Sur. ..... Rigging up.
Smith & McDaniels' No. 1 Chapman, 990 ft. N and E, SW, Sec. 52, Blk. 25, H.&G.N. Sur. ..... Drlg. 300 ft.
Reynolds et al's No. 1 Webb, 330 ft. N, 330 ft. E, NW, Sec. 60, Blk. 25, H.&G.N.R.R. Sur. ..... S.D. 2,530 ft.
Tedesco Oil Co. et al's No. 1 Morse, 330 ft. N and W, NE SW, Sec. 1, Blk. 26, H.&G.N. Sur. ..... Building rig.
Vulcan O. & G. Co.'s No. 1 Carpenter, 330 ft. N and W, W 80 ac., NW, Sec. 25, Blk. 25, H.&G.N.R.R. Sur. ..... S.D. 2,810 ft; T.P. 2,740 ft; 1,000 ft. oil in hole.
Wilson et al's No. 1 Heaston, 330 ft. S and W, Sec. 160, Blk. B-2, H.&G.N.R.R. Sur. ..... 2,500,000 ft. gas 2,825 ft; drlg. 3,100 ft.

HUTCHINSON COUNTY

Danciger O. & R. Co.'s No. 1 Cheatham, 330 ft. N and E, SW SE, Sec. 38, Blk. Y, A.&B. Sur. ..... T.D. 2,915 ft; U.R. 8-in. csg.
Holmes et al's No. 3 Quinn, 330 ft. S and W, Sec. 7, Blk. 9, I.&G.N. Sur. ..... Rig on ground.
Huber & Co.'s No. 1 Christian, 330 ft. E and 990 ft. N of SW¼ Sec. 33, Blk. Y, A.&B. Sur. ..... Drlg. 1,750 ft.
Phillips Pet. Co.'s No. 1 Johnson-Trammel, 930 ft. N, 330 ft. W, SE cor. W½ NW, Sec. 38, Blk. Y ..... T.D. 3,250 ft.
Phillips Pet. Co.'s No. 1 Johnson-Mayer, 990 ft. N and 990 ft. W line, NE, Sec. 37, Blk. Y, A.&B. Sur. ..... S.D. 3,039 ft.
Phillips Pet. Co.'s No. 1 Johnson-Rudy, 330 ft. W, 330 ft. S, SW SW, Sec. 30, Blk. Y, A.&B. Sur. ..... T.D. 3,346 ft; P.B. 2,975 ft; S.D.
Phillips Pet. Co.'s No. 1 Herring, 330 ft. N and E, W½, Sec. 7, Blk. X02, H.&O.B. Sur. ..... Rig on ground.
Phillips Pet. Co.'s No. 1 Pease, 330 ft. S and E, Sec. 9½, Z. C. Collier Sur. ..... Rig.
Phillips Pet. Co.'s No. 1 Vake (Hazel), 330 ft. N and W, Sec. 4, Blk. XO2, H.O.&B. Sur. ..... Drlg. 2,625 ft.
Sinclair O. & G. Co.'s No. 1 Johnson Bros., 330 ft. N and E, NW, Sec. 32, Blk. Y, A.&B. Sur. ..... Drlg. 1,650 ft.
Skelly Oil Co.'s No. 1 Johnson Bros., 660 ft. S and W, SE, Sec. 30, Blk. Y, A.&B. Sur. ..... T.D. 2,496 ft; set 8-in. csg.
Spurlock et al's No. 1-A Christian, 440 ft. S, 330 ft. W, NE cor. SE SE, Sec. 33, Blk. Y ..... Drlg. 2,960 ft.
Texas Interstate P. L. Co.'s No. 1 Bost, 660 ft. N and E, Sec. 9, Blk. Y-2, T.T.R.R. Sur. ..... Drlg. 800 ft.

LAMB COUNTY

Graham O. & G. Co. et al's No. 1 Ellwood, CWL, Sec. 9, Blk. T, T. A. Thompson Sur. ..... S.D. 4,408 ft.

LIPSCOMB COUNTY

Brown et al's No. 1 Box T Ranch, SW NE, Sec. 612, H.&T.C. Sur. ..... S.G. 3,760 ft; S.D. 4,142 ft.
Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur. ..... S.D. 4,954 ft.

LUBBOCK COUNTY

Center Oil Co.'s No. 1 Bowles Ranch ..... Small S.O. 1,133-40 ft.; S.D. 4,167 ft.

MOORE COUNTY

Delmar Oil Co.'s No. 1 Jones, 990 ft. E, 330 ft. N, NW, Sec. 171, Blk. 3-T, T.&N.O. Sur. ..... Fishing 1,130 ft.
Fritch O. & G. Co.'s No. 1 Lee Bivins, C N 40 ac., N 160 ac., Sec. 4, George Mahan Sur. ..... S.D. 3,212 ft.
Gulf Prod. Co.'s No. 1 Kilgore, C SW, Sec. 22, Blk. P.Mc., E.L.R.R. Sur. ..... Gas estimated 15,000,000 ft. 3,650-60 ft; T.D. 3,645 ft; to complete as gasser.
Shamrock O. & G. Co.'s No. 1 Shory, 330 ft. N and W. NE, Sec. 187, Blk. 3-T, T.&N.O. Sur. ..... 15,000,000 ft. gas 2,830-3,050 ft; rebuilding rig; T.D. 3,135 ft.
Texas Interstate P. L. Co.'s No. 1 Zotness, C NW, Sec. 55, Blk. 6-T, T.&N.O. Sur. ..... Drlg. 990 ft.
Texas P. L. Co.'s No. 1 Sneed, Jr., C NE, Sec. 46, Blk. 6-T, T.&N.O. Sur. ..... Drlg. 395 ft.

MOTLEY COUNTY

Explin. Co.'s No. 6 Matador, 330 ft. N line, 330 ft. E line, Sec. 132, Blk. M ..... Drlg. 4,130 ft.
Matador Oil Corp.'s No. 1 Owens, C NE, Sec. 10, Blk. G. B.&B. Sur. ..... S.D. 580 ft.

POTTER COUNTY

Marshall Spivey's No. 1 Bivins, C SW, Sec. 39, Blk. M-20, G.&M. Sur. ..... Location.
Texas Interstate P. L. Co.'s No. 1 Masterson, C, Sec. 37, Blk. B-10, E.L.R.R. Sur. ..... Drlg. 1,640 ft.

RANDALL COUNTY

W. A. Patterson's No. 1 Palo Duro, Sec. 60, Blk. K-14. ... S.D. 1,250 ft.

ROBERTS COUNTY

Big Bend Oil Co.'s No. 1 Ledrick, Sec. 7, Blk. A-5 ..... Shot 10 qts. 5,270-93 ft.; S.O. 5,288 ft.; S.D. 5,992 ft.

WHEELER COUNTY

Anderson's No. 1 Reneau, C SW NE, Sec. 98, Blk. 23, H.&G.N. Sur. ..... Drlg. 1,867 ft; 10,000,000 ft. gas 1,862-67 ft.
Johnson et al's No. 2 Hicks, 890 ft. W, 990 ft. S, Sec. 49, Blk. 17, H.&G.N. Sur. ..... S.D. 825 ft.
Lone Star Gas Co.'s No. 3 Edwards-Trostle, C NE NW, Sec. 130, Blk. 23, H.&G.N. Sur. ..... Fishing 1,148 ft.
Lone Star Gas Co.'s No. 2 Hicks (Martin), C NW NE, Sec. 52, Blk. 17, H.&G.N.R.R. Sur. ..... S.D. 1,610 ft.
Long et al's No. 1 Willington, 330 ft. S and W, NW, Sec. 8, Blk. 27, H.&G.N. Sur. ..... Rigging up.
Magnolia Pet. Co.'s No. 2 Worley, 330 ft. N and W, NE, Sec. 39, Blk. 24, H.&G.N. Sur. ..... Location.
McGee et al's No. 1 Jolly, C NE, Sec. 15, Blk. A-8, H.&G.N. Sur. ..... Pipe stuck; T.D. 530 ft.
Murchison & Fain's No. 1 Magnolia Pet. Co., C SE NE, Sec. 54, Blk. 23, H.&G.N. Sur. ..... Rigging up.
Murchison & Fain's No. 2 Purcell, C SW NW, Sec. 50, Blk. 17, H.&G.N. Sur. ..... Location.
Murphy's No. 1 Pike, cen. NE¼ of SW¼ Sec. 50, Blk. 17, H.&G.N. Sur. ..... Drlg. 1,890 ft; 18,000,000 ft. gas 1,750 ft.
Wischkamper et al's No. 1 Kiser, 330 ft. N and E of SW¼ Sec. 33, Blk. 17, H.&G.N Sur. ..... Drlg. 1,165 ft.
Woodley et al's No. 1 Sloss & Admire, 660 ft. N, 330 ft. E, Sec. 47, Blk. 13, H.&G.N. Sur. ..... Spudded and S.D.

GULF PORT EXPORTS DECLINE BUT COASTWISE SHIPMENTS GAIN

HOUSTON, Tex., July 5.—A sharp drop in export movements of crude and refined products but a decided increase in coastwise liftings was noted in shipments from Gulf Coast ports during May. Balancing of the figures showed a total increase of 517,528.43 bbls. in the water shipments.

Total shipments of crude and refined products for the month were 18,982,321.84 bbls. as against 18,464,793.41 bbls. for the preceding month. The sharp gain in coastwise movements was mainly the result of a heavy month in crude liftings for Atlantic Coast ports. There was only a slight gain in refined products.

Total export shipments for May were only 2,097,185.99 bbls. as against 3,210,971.15 bbls. for April.

Shipments by companies were:

Company, port—	Coastwise April	Coastwise May	Export April	Export May
REFINED				
Standard Oil Co. (La.), Baton Rouge	429,415.00	852,726.00	593,229.00	323,151.00
The Texas Company, Port Arthur	1,242,741.00	1,562,624.00	342,917.00	83,248.00
Gulf Refining Co., Port Arthur	2,506,675.68	2,360,967.99	178,385.00	75,685.77
Magnolia Petroleum Co., Beaumont*	1,419,702.21	1,678,858.26	.....	.....
Humble Oil & Refg. Co., Baytown	2,320,744.89	1,581,099.61	2,042,646.15	1,562,210.22
Atlantic Oil Prod. Co., Atreco	68,089.21	157,150.34	.....	.....
Pure Oil Co., Smiths Bluff	424,225.92	385,186.51	.....	.....
Total refined	8,411,593.91	8,578,612.71	3,157,177.15	2,044,294.99
CRUDE				
Standard Oil Co. (La.), Baton Rogue	423,312.00	397,830.00	.....	52,891.00
The Texas Company, Port Arthur	.....	382,149.00	.....	.....
Gulf Refining Co., Port Arthur	445,030.84	481,678.48	.....	.....
Magnolia Petroleum Co., Beaumont*	958,581.32	1,081,706.35	.....	.....
Humble Oil & Refg. Co., Texas City	615,307.00	753,079.00	.....	.....
Ingleside	165,360.00	98,758.00	.....	.....
Baytown	215,776.00	272,219.00	53,794.00	.....
Harbor Island	1,521,814.00	2,299,978.00	.....	.....
Neches	.....	60,011.00	.....	.....
Atlantic Oil Prod. Co., Atreco	839,324.37	904,401.36	.....	.....
Beaumont	182,339.45	126,366.80	.....	.....
Pure Oil Co., Smiths Bluff	700,194.37	561,909.15	.....	.....
Sun Oil Co., Sabine Pass	775,245.00	886,437.00	.....	.....
Total crude	6,842,228.35	8,306,523.14	53,794.00	52,891.00
Total shipments	15,252,822.26	16,885,135.85	3,210,971.15	2,097,185.99

*Magnolia Petroleum Co. makes no distinction in reports between coastwise and export shipments.

KENTUCKY-TENNESSEE

(Continued from Page 63)

Hupp and French's second test on the W. L. Weir farm, in the Cane Run area of Daviess County, produced 25 bbls. in 24 hours.

Rex-Pyramid Oil Co. has an excellent gas produced in the Red Hill Field, and starting another which is on an unknown lease. Same company is drilling No. 4 Yeiser farm, same field.

Eastern Gulf Oil Co. is drilling No. 5 Rose B. Tyler, also No. 1 in the Chapman Pool, in the Cane Run area, on the Christian farm.

Henderson County

In the Niagara Pool, in Henderson County, the late wells show a number of dry holes. Iley J. Browning, the geologist from Ashland, in eastern Kentucky, got his share of the bad holes. His No. 1 Green Osborn; No. 1 Bert Duncan and No. 1 T. E. Farley farm were all dusters.

H. A. Pointer and others found a dry hole in No. 1 on the G. F. King farm, same pool.

P. E. Tichenour's No. 4 J. E. Knight farm, is reported as producing an initial of 35 bbls. No. 5, same farm, is drilling.

Niagara Oil & Gas Co. has a dry hole in No. 1 on the Cleveland Griffin property. Same company is drilling No. 1 Joe Slivey and No. 1 Minnie Robards property.

John B. Lyddane, trustee's No. 7 on the C. M. Gish 200 acres, pumped 10 bbls. initial.

Wittmer Oil & Gas Co.'s No. 2 N. R. Jackson, good for 15 bbls. and No. 3, same lease, 5 bbls.

Thomas Wittmer is drilling No. 7 on another of the Gish farms, in the Niagara Field. Pearson and Parks are drilling No. 1 Tom Parks lease, and No. 2 George Fulkerson lease.

McLean County

Miller and Damron drilled in what is reported a 100-bbl. initial producer on the Dunn farm in the Grandstone Hill section of McLean County, being the best completion from this active field for some time.

Field Pickups

Reports that two dry holes have been found in Cumberland County, one in what is known as the Williams Prong and the other in the Sulphur Creek area of the county.

Missouri-Kansas Pipe Line Co. is locating an office at Franklin, Simpson County, Kentucky, and gas will be ready for consumers in that county seat within a week or so.

OIL IN UZBEKISTAN

The Russian oil administration announces that a new well has started producing in the prospecting area Shore-Sou, near the city of Kokand, in Uzbekistan. It is 364 meters deep, and the daily yield of oil is about 370 tons. Since 1927, prospecting work had been carried on in this region but few tangible results had been obtained hitherto. This recent discovery creates a basis for the development and extension of oil drilling in Uzbekistan. The control figures for production during the current year in Central Asia are 45,000 tons, while the requirements of the region are 835,000 tons. Central Asia imports annually 800,000 tons of oil products, chiefly from Baku, 1,000 kilometers away.

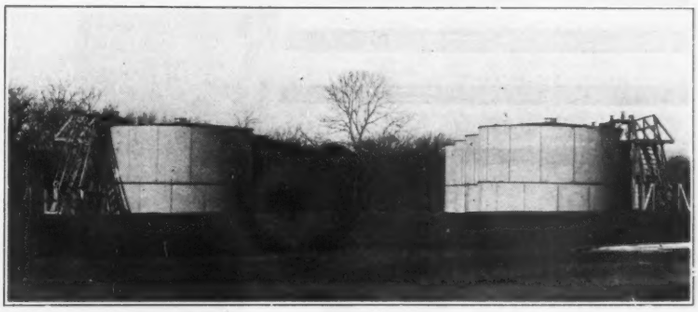
FRENCH OIL PORT

The extension of the petroleum industry in France is tending to bring about creation of new facilities for unloading the crude at points which will be near both the industrial centers and the principal ports for river navigation, and yet at a safe distance from densely populated districts. A new petroleum port is being constructed at Port-Jerome on the Seine, a little below Rouen, near the junction with the canal from Tancarville to Havre. Several important petroleum companies have commenced construction of quays where tankers will find sufficient depth of water and modern unloading equipment. Efforts are being made to reduce handling charges in the new installations to minimum.

V.O.C. PRODUCTION

NEW YORK, July 5.—Venezuelan Oil Concessions reports for the week ended June 21 production of 112,289 metric tons of crude oil in Venezuela, a daily average of 16,041 metric tons, contrasted with 112,739 tons, or 16,109 tons daily, in the preceding week.

Eight 1,000-Bbl. Maloneys at Oklahoma City. Erected by distributer, Maloney Sales Corp.



MALONEY *Vapor-Pressure* Tanks are painted with aluminum to reduce temperature variations.. and equipped with valves set at 16 oz. pressure and 2 oz. vacuum to hold the vapor pressures which occur . . This construction eliminates breathing losses.

"Alone in Quality"

MALONEY TANK MFG. COMPANY

Tulsa, Okla., U.S.A.

Distributers at All Principal Petroleum Points

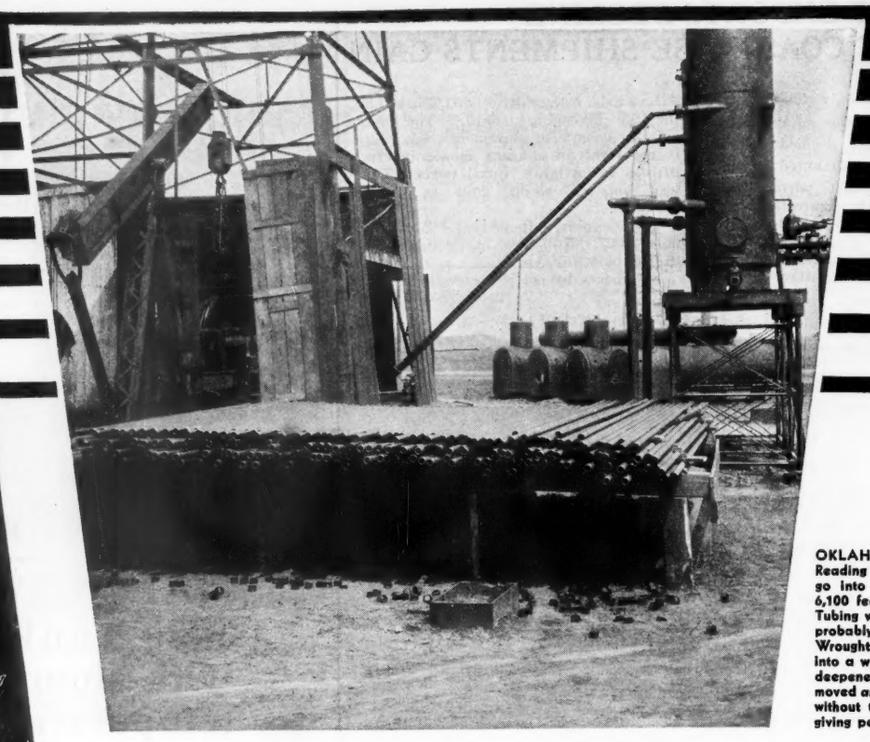
Construction with 12-gauge (or heavier) rust-resisting Keystone Copper Steel, half-inch, heat treated bolts, heavy angle ties and reinforcements — insures ample strength and outstanding durability.

Maloney A. P. I. Bolted Steel Tanks conform to A. P. I. dimensional standards and carry the official A. P. I. monogram.

MADE OF KEYSTONE AMERICAN COPPER STEEL

MALONEY PATENTED BOLTED COPPER-STEEL TANKS

MALONEY ALONE



OKLAHOMA CITY POOL—Reading 5-Point Tubing ready to go into the hole. More than 6,100 feet of Reading 5-Point Tubing was used in this well—probably the longest string of Wrought Iron Tubing ever put into a well. When the well was deepened, this tubing was removed *and then set back again* without trouble! The tubing is giving perfect service.

When you want to be SURE, make it Genuine *Puddled* Wrought Iron!

Quality—not price—is the measuring stick for Oil Country pipe. Where pipe must *last*—where production depends upon reliability of tubing—order Reading 5-Point Pipe, every time.

For Reading 5-Point Pipe is the original, Genuine *Puddled* Wrought Iron. It gives you the time-tested resistance to corrosion—the time-tested ability to stand up under fatigue—that have made Reading 5-Point tubular goods famous since 1848. There is no guesswork about Reading 5-Point Galvanized Tubing, Reading 5-Point Casing and Reading 5-Point Line Pipe—you are SURE of their superior endurance.

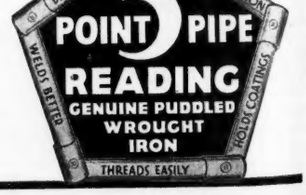
To protect yourself from needless pipe troubles and delay, insist on getting Genuine *Puddled* Wrought Iron. We prevent mistake and substitution by placing our name and indented spiral mark on every length of Reading 5-Point Pipe.

READING IRON COMPANY
Reading, Pennsylvania

Atlanta . Baltimore . Cleveland . New York
Philadelphia . Boston . Cincinnati . St. Louis
Chicago . New Orleans . Buffalo . Houston
Tulsa . Seattle . San Francisco . Los Angeles
Detroit . Pittsburgh . Kansas City

Reading pipe distributed by:
Frick-Reid Supply Corp. Bradford Supply Co.
Republic Supply Co. . Superior Tube Co.
Our own stocks at Houston, Texas

As an added improvement, all Reading Galvanized Couplings for Reading 5-Point Tubing are now furnished with galvanized threads.



GENUINE PUDDLED WROUGHT IRON
READING PIPE
DIAMETERS RANGING FROM 1/8 TO 20 INCHES

Science and Invention Have Never Found a Satisfactory Substitute for Genuine Puddled Wrought Iron

Of Interest to Sales Departments

FORBIDS USE OF "EPCO" AS INFRINGING "ESSO"

The Court of Customs and Patent Appeals at Washington, D. C., has forbidden the registration of the trade-mark of "Epco" on the grounds that it is an infringement on the trade-mark "Esso" of the Standard Oil Co. of New Jersey. The decision reverses the findings of the commissioner of patents.

The controversy grows out of the application by appellee for registration in the United States Patent Office of the coined word "Epco" as a trade-mark for use on gasoline and oils. In one instance the drawing shows the word affixed upon the side of a pictorial representation of an automobile and in the other on the under side of the wings of an airplane.

The court in its decision stated: "It is perfectly obvious that the words "Epco" and "Esso" have much resemblance. Each consists of four letters of which the first and last are the same. When applied upon identical goods it seems to us that confusion would be inevitable."

VACUUM ENTERS CLEVELAND

Vacuum Oil Co. has extended its retail distributing system through the opening of a company-owned chain in Cleveland this week. The extension of the company's retail operations to Cleveland is in line with its development of the business of the Commonwealth Oil Co. of Ohio and the Great Western Oil Co., operating retail stations in Indiana and Michigan, control of these companies having been purchased by Vacuum late in 1929.

Vacuum's Cleveland operations will consist of the sale of gasoline and lubricants, which will be distributed through 66 company stations and 30 independent dealers. Further expansion of Vacuum's marketing operations is indicated by the report that the company has purchased a number of retail stations in Pennsylvania.

Expansion of retail operations by Vacuum, it is believed, will proceed pending further developments in the plan to consolidate the company with Standard Oil Co. of New York. The consolidation plan, which is subject to government approval, calls for creation of General Petroleum Corp. as a holding company, and expansion of the combined Vacuum-Socony businesses on a national scale.

OPENS TANK CAR STATION

CHICAGO, July 5.—The new tank car service station at 5300 Broadway, corner of Berwyn Avenue, is one of the most elaborate service stations in the city. It has nine of the latest design pumps, air lines, greasing racks and every convenience for the quick and satisfactory supplying of the motorists's needs. The station backs up on the North Shore elevated railway and will receive its gasoline in tank cars over that railroad. It is frankly announced as a cut-price station, selling at a discount of 2 cents under the regular service station scale for the city.

ANNOUNCE NEW PLANT

The Big Horn Oil & Gas Co. has announced plans for the construction of a small skimming plant at Billings, Mont. Construction of the plant, which will cost $100,000, is to start immediately.

The Big Horn company is affiliated with the Associated Independent Oil Dealers and the plant at Billings is to furnish gasoline and other products in the Billings territory for these dealers. Crude oil is to be obtained from the Oregon Basin and Cat Creek Fields. J. D. Everett is in charge of the refinery.

BUREAU OF STANDARDS EXPLAINS LABORATORY OIL STABILITY TEST

By R. C. Hardy
Bureau of Standards*

Oils used to lubricate automobile engines undergo changes which may be classified as (a) contamination, (b) thermal decomposition or "cracking," and (c) oxidation. The amount of contamination which an oil undergoes is governed chiefly by the engine and operating conditions and is not ordinarily considered a matter of oil stability.

Since the formation of a "carbon" deposit in the combustion chamber seems primarily a matter of the residue left by the oil when "cracked," the Conradson carbon residue test has usually been assumed to be a measure of the tendency of an oil to form "carbon" in an engine. The work of Livingstone and Gruse[1] [2] gives considerable support to this viewpoint when poppet valve engines are considered. Two or three of the oils used by them, however, gave results which were not in accord with the conclusions drawn from the other oils.

These exceptions suggest that some conditions entering into carbon formation in the engine are not approximated closely enough in the carbon residue test. The conditions in the carbon residue test differ from those in the engine. In the carbon residue test, the oil is evaporated at atmospheric pressure, the vapor formed is removed continuously, the time allowed for evaporation of different oils is made approximately constant by varying the heat input, and during the test the oil is protected from oxidation. In the engine cylinder the oil is evaporated under a fluctuating pressure which at times is considerably higher than atmospheric, the vapor formed is periodically removed; the time for evaporation varies with the volatility of the oil since the heat input is not changed for different oils; during the intake and compression strokes the oil is in contact with an oxidizing atmosphere.

These considerations suggest that a test in which the oil is evaporated from a bulb placed in a constant temperature bath, as in the English coke test, may approximate engine conditions more closely. If a stream of air diluted with carbon dioxide were passed through the bulb during the test, engine conditions would be still more closely approached, since this would provide a mild oxidation and at the same time continuously remove the vapor.

Crankcase Temperature

In the crankcase the temperature of the main body of the oil seldom exceeds 200° F. and usually is considerably lower. "Cracking" of the oil at these temperatures is negligible and oxidation proceeds fairly slowly. The oil splashed against the under surface of the piston experiences a considerably higher temperature and rapid oxidation and appreciable "cracking" may occur.

Oxidation of oil results in an increase in viscosity, color intensity, and acidity, and finally in the formation of an asphaltic precipitate. The increase in viscosity is, in general, more than offset by the dilution with heavy ends of the fuel. The increase in color is probably of no greater importance than to indicate the known fact that oxidation of the oil is occurring. The increase in acidity, being due to organic acids, is probably not very serious from a corrosion point of view. The acids[3] may have an important influence upon the precipitation of the asphaltic material, and together with it and dust or wear particles, may cause the oil to form heavy emulsions if water is allowed to enter the crankcase in appreciable amounts.

Oxidation Test

The Sligh oxidation test developed at this bureau is believed to be one of the most rapid and reproducible of the various tests which have been devised for measuring the susceptibility of an oil to oxidation. Briefly, 10 grams of oil are heated to 200° C. with oxygen in a tightly closed flask for two and one-half hours, cooled, diluted with low boiling naphtha and filtered. The weight of the insoluble material, or asphaltenes, obtained by this treatment varies from 0 to 60 or 70 milligrams, with the majority of oils yielding values between 10 and 40 milligrams. The precipitate is almost completely soluble in benzene and chloroform. At higher temperatures, a varnish-like material, insoluble in ordinary solvents, is formed. Sligh[4] states that oxidation for 30 minutes at 250° C. yields about equal amounts of asphaltenes and "varnish."

Table 1 contains data obtained from the analysis of several engine sludges obtained from various sources. It is thought that the trouble experienced with

(Continued on Page 174)

*Paper read before Petroleum Technologists of the National Petroleum Association at the Bureau of Standards, Washington, D. C.
[1]J. Soc. Aut. Eng. 20, p. 688 (1927).
[2]J. Ind. & Eng. Chem. 21, p. 904 (1929).
[3]J. G. Ford—J. Ind. & Eng. Chem. 19, 1165 (1927).

TABLE 1—ANALYSIS OF SLUDGES

Sample No.	Source of material—	Water %	Oil %	Naphtha insoluble %	Ash %	Percentage naphtha insoluble soluble in Benzene	Chloroform
1	Oil sump	trace	67	27	5.4	..	24
2	Oil strainer ...	trace	..	33	9.8	..	13
3	Oil filter	.....	81	16	2.6	27	..
4	Oil filter	.....	..	..	..	5	8
5	Crankcase	.....	..	..	0.5	..	44
6	Crankcase	33	48	9	0.7	..	18
7	Crankcase	*41	54	4	0.7	..	5

*Water and volatile matter by difference.

QUINLAN LEAVES PHILLIPS

P. J. (Pat) Quinlan has resigned as manager of the Wichita, Kans., marketing division of the Phillips Petroleum Co. to enter private business. Mr. Quinlan is widely known in Mid-Continent marketing circles.

He was in charge of the Wichita division for the Standard Oil Co. of Indiana, resigning to engage in the marketing business. He joined the Phillips organization in 1928 when that company started to expand its station facilities in the Wichita territory. He has been succeeded with the Phillips company by Robert Cairns, formerly assistant manager of the St. Louis division.

TO MARKET ETHLY GASOLINE

The Rio Grande Oil Co. of Los Angeles with refineries in California, Arizona and Texas, will start the distribution of Ethyl Gasoline about July 1. A contract with the Ethyl Gasoline Corp. permits the company to sell the product in California, Arizona, New Mexico and Texas.

NEW TANKER LARGEST OF INDIANA'S FLEET

The launching of the "Edward G. Seubert," the new tanker of the Standard Oil Co. of Indiana, took place at the yards of the Manitowoc Shipbuilding Co., at Mantiowoc, Wis., on July 2, at 11 o'clock a. m. The tanker was christened by Mrs. Edgar H. Scott, sister of the president of the Standard Oil Co. Members of the board of directors attended the ceremony.

The new tanker, "Edward G. Seubert," is the largest of the Standard's fleet of lake tankers. It has a length over all of 390 feet, a width of 53 feet and a depth of 27 feet. The deadweight tonnage is 6,050 tons and its capacity in barrels of petroleum products is 42,000 bbls. A rather unique feature is that the firing of the triple expension three-cycle steam engine which supplies the motive power can be accomplished with either oil or coal.

PENNSYLVANIA TAX REDUCED

Contrary to the general trend over the past several years, one state reduced its gasoline tax rate on July 1 while the voters in another state refused to increase its present tax rate.

The gasoline tax in Pennsylvania was reduced from 4 to 3 cents on July 1. This carried out the Pennsylvania law which established the 4-cent rate with the provision that the rate be reduced to 3 cents on July 1, 1930. Pennsylvania has had a gasoline tax since 1921.

Last week the voters of North Dakota voted against a proposal to increase the gasoline tax from 3 to 4 cents. This is said to be the first time that voters in any state have refused to increase the gasoline tax rate.

Proposals to increase gasoline tax rates are under consideration in several states. Among these states are West Virginia, Nebraska, Colorado, Wisconsin, Massachusetts, Georgia, Alabama, Washington and Louisiana.

COMPLETES PROGRAM

The enlargement and improvement progrom which has been under way for several months at the Farmers Valley, Pa., refinery of the McKean County Refining Co. is now nearing completion. The refinery was purchased early in the year by the Quaker State Refining Co. which announced plans at that time to enlarge the capacity and round out operations so that the plant could manufacture a full line of Quaker State products. The same interests control two other refineries in Pennsylvania and one in West Virginia.

Practically every phase of the McKean County operation has been enlarged. This includes boiler room, barreling house, filter capacity, distillation equipment and storage. The plant when completed will have a capacity of approximately 2,000 bbls. daily.

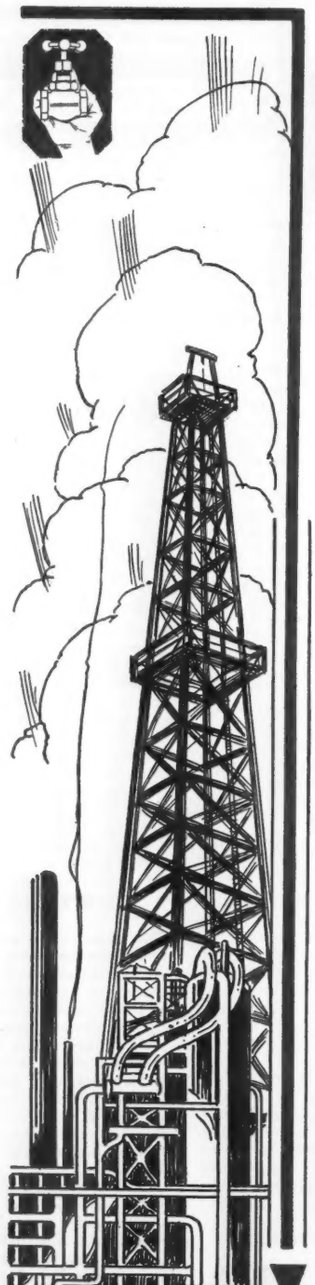
ASSOCIATED GETS CONTRACT

The Associated Oil Co. has been awarded the contract for providing motor oils for Navy operations in the Pacific Coast area during the fiscal year 1930-1931. The award includes approximately 1,000,000 gallons of lubricating oils, which will be used on board battleships, destroyers, submarines, aircraft carriers and other equipment, and in aircraft out of the Pacific Coast ports and Honolulu.

The contract awarded the Associated Oil Co. will cover practically all Navy Department requirements for Washington, Oregon, Idaho, Nevada, California, Arizona, Honolulu and Alaska.

FOR BETTER SERVICE

In the Petroleum Industry



LUNKENHEIMER
"King-clip"
GATE VALVES

have proved their worth in oil field and refinery service. Their widespread adoption is evidence of their better service in the industry in which rugged equipment plays such an important part.

Exceptionally sturdy construction with bronze mountings throughout—"King-clip" Valves are designed to withstand rough usage under most trying conditions and to provide low-cost, uninterrupted service. They serve equally as well on steam, oil, gas, air, water and gasoline lines.

Made in three patterns—Inside Screw, Outside Screw and Yoke and Quick Operating. Screw Ends, ¼ to 2 in. for 150 lb. W. S. P., 225 lb. Gas, Liquid Pressure — Screw Ends, 2½ to 4 in., Flange Ends, 1½ to 4 in. for 125 lb. W. S. P., 175 lb. Gas, Liquid Pressure. Also procurable in All-Iron patterns for handling solutions which attack bronze but not iron.

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LUNKENHEIMER VALVES

5-59-91

CALIFORNIA OIL FIELD OPERATIONS FOR MAY

According to figures collected by the American Petroleum Institute, Pacific Coast office, the total production of crude oil in California for May amounted to 19,044,444 bbls., an average of 614,337 bbls. per day. This is a decrease of 11,288 bbls. per day under April production.

Total stocks of crude and all products in Pacific Coast territory increased during the month 538,775 bbls. The total stocks at the end of the month were 187,731,534 bbls. The total stock increase for 1930, up to May 31, was 2,967,801 bbls.

Sixty-four wells were completed during the month with an initial daily production of 34,954 bbls., compared with 54 wells completed during April with an initial production of 42,142 bbls.

PRODUCTION

(Figures of production and stocks are in barrels of 42 gallons)

District—	Barrels per month	Daily average May, 1930	Daily average April, 1930	Daily average May, 1929
Kern River	466,120	15,036	15,630	13,948
Mount Poso	308,062	9,937	11,913	3,326
Round Mountain	109,965	3,547	3,938	100
Fruitvale	78,671	2,538	1,940	980
McKittrick	121,928	3,933	4,231	4,242
Midway-Sunset	1,972,929	63,643	66,878	65,740
Elk Hills	610,714	19,701	20,193	17,302
Lost Hills-Belridge	69,726	2,249	2,278	4,388
Coalinga	289,651	9,343	9,266	9,322
Kettleman Hills	459,258	14,815	14,085	3,373
Wheeler Ridge	18,685	603	599	660
Watsonville	1,887	61	63	62
Santa Maria	106,806	3,445	3,115	4,302
Capitan	309	10	19	.....
Summerland	10,973	354	325	121
Elwood	1,533,125	49,456	43,967	28,282
Santa Barbara	.....	.....	.....	49
Rincon	94,607	3,052	2,824	3,564
Ventura Avenue	1,503,518	48,501	45,285	60,692
Ventura-Newhall	151,916	4,901	4,982	4,817
Los Angeles-Salt Lake	46,513	1,500	1,510	1,550
Whittier	44,298	1,429	1,400	1,445
Fullerton (Brea Olinda)	392,105	12,649	12,654	12,547
Coyote	316,891	10,222	10,369	11,205
Santa Fe Springs	3,719,842	119,995	128,073	181,600
Montebello	221,003	7,129	7,317	10,215
Richfield	293,164	9,457	9,939	15,784
Huntington Beach	884,017	28,516	28,458	43,331
Long Beach	2,948,667	95,118	103,283	175,189
Torrance	352,746	11,379	11,871	13,621
Dominguez	324,742	10,476	9,718	10,069
Rosecrans	214,608	6,923	6,395	5,808
Inglewood	532,669	17,183	17,427	23,681
Newport	1,240	40	40	37
Seal Beach	680,204	21,942	23,485	42,428
Potrero	74,715	2,410	1,336	549
Lawndale	10,735	346	433	1,586
Playa Del Rey	77,435	2,498	386	.....
Total	19,044,444	614,337	625,625	775,915
April	18,768,743	625,625	.....	.....
Decrease	*275,701	11,288	.....	.....

*Increase.

STOCKS

Heavy crude, heavier than 20° A.P.I.,

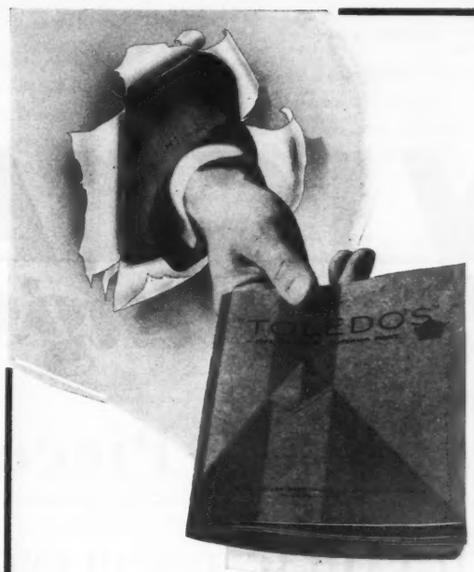
	May 31, 1930	April 30, 1930	May stock increases	May 31, 1929
Including all grades fuel	112,777,460	112,198,691	578,769	102,921,746
Refinable crude, 20° A.P.I., and lighter	43,749,958	44,475,703	*725,745	30,455,516
Gasoline	18,643,033	18,046,275	596,758	14,108,752
Naphtha distillates	3,678,131	3,832,736	*154,605	2,233,956
All other stocks	8,882,952	8,639,354	243,598	10,074,839
Total all stocks	187,731,534	187,192,759	538,775	159,794,809

*Decrease.

DEVELOPMENT

District—	New rigs up	Active drilling	Completed	Daily initial output	Active producing	Abd. Wells Drillers	Abd. Wells Producers
Kern River	1	3	2	280	903	0	0
Mount Poso	7	6	5	500	73	2	0
Fruitvale	1	4	3	1,420	16	2	0
Round Mountain	4	6	1	100	20	0	0
McKittrick	0	0	0	0	234	0	0
Midway-Sunset	2	12	6	3,535	1,897	0	11
Elk Hills	1	1	0	0	241	3	1
Lost Hills-Belridge	2	3	3	41	165	0	0
Coalinga	1	1	0	0	723	0	0
Kettleman Hills	0	5	0	0	6	0	0
Buttonwillow Gas Field	0	0	0	0	7	0	0
Wheeler Ridge	0	0	0	0	33	0	0
Watsonville	0	0	0	0	6	0	0
Santa Maria	0	2	0	0	185	2	0
Summerland	0	0	1	125	98	0	1
Capitan	2	1	1	275	1	1	0
Elwood	4	8	2	5,648	33	0	0
Santa Barbara	1	0	0	0	0	0	0
Rincon	4	5	0	0	32	0	0
Ventura Avenue	1	23	11	12,745	146	0	0
Ventura-Newhall	0	19	1	145	413	2	0
Los Angeles-Salt Lake	0	0	0	0	314	0	0
Whittier	0	1	0	0	163	0	0
Fullerton	0	1	0	0	368	0	0
Coyote	1	6	0	0	195	0	0
Santa Fe Springs	0	23	12	2,793	433	0	5
Montebello	0	0	0	0	169	0	0
Richfield	2	3	2	465	208	0	0
Huntington Beach	0	2	0	0	428	0	0
Long Beach	16	85	11	3,727	839	0	2
Torrance	0	0	0	0	560	0	1
Dominguez	0	2	0	0	61	0	0
Rosecrans	2	2	0	0	102	0	0
Inglewood	0	2	0	0	216	0	0
Newport	0	1	0	0	3	0	0
Seal Beach	0	3	0	0	131	0	0
Potrero	5	8	2	1,475	11	1	0
Lawndale	0	1	0	0	8	0	0
Playa Del Rey	8	16	1	1,680	2	1	0
Miscellaneous drilling	10	176	0	0	0	11	0
May	75	431	64	34,954	9,443	25	21
April	100	413	54	42,142	5,589	26	26
Decrease	25	*18	*10	7,188	146	1	5
Average fore year 1929	109	610	76	100,625	10,550	26	18
Average for year 1928	107	520	59	56,802	10,823	15	25
Average for year 1927	97	404	75	39,992	11,276	23	31
Average for year 1926	95	422	76	32,635	11,288	24	17
Average for year 1925	105	417	79	42,247	11,393	28	12

*Increase.



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THE NEW "TOLEDO" HANDBOOK

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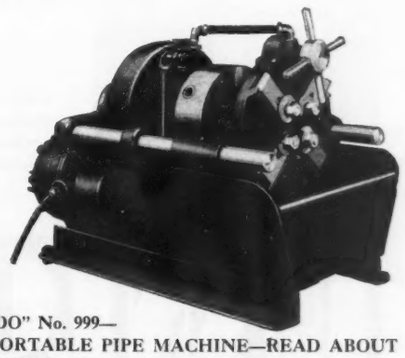
A complete description of the time-proven, dependable line of "TOLEDO" pipe tools and kindred articles.

Page after page of real installation pictures, graphically showing how genuine "TOLEDOS" can be of the utmost assistance in making YOUR profits larger and work easier.

Be sure to secure a copy of this new "TOLEDO" handbook.



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½" TO 2" PORTABLE PIPE MACHINE—READ ABOUT IT IN THE NEW HANDBOOK "K".

THE TOLEDO PIPE THREADING MACHINE CO. TOLEDO, OHIO
NEW YORK OFFICE, 72 LAFAYETTE ST.

VICTAULIC
Couplings

Only 5 Pieces
to
VICTAULIC COUPLINGS

Pressure forces the lip section of the ring more tightly against the pipe. Strengthens the seal.

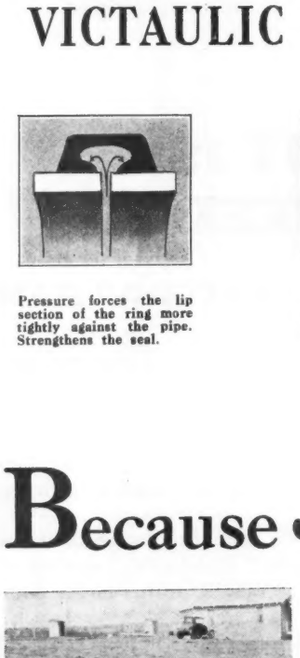
Vacuum draws the lip section of the ring more tightly against the pipe. Strengthens the seal.

Expansion.

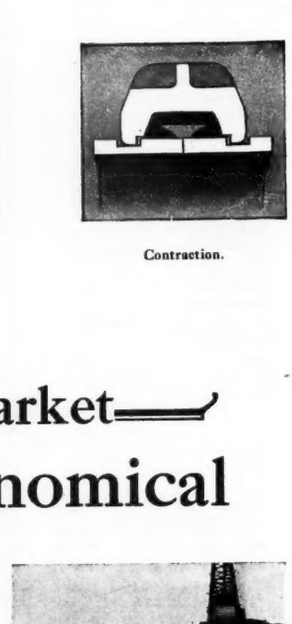
Contraction.

The lowest priced Coupling on the market

Because • • it is most economical



to INSTALL
to MAINTAIN



Victaulic Couplings are more quickly installed with unskilled labor, and once installed are *permanently* LEAK-PROOF, under vacuum or pressure.

Write for Victaulic Bulletin No. 1

HANLON-WATERS
INC.
General Offices: TULSA, OKLA. *Box 1404*

HOUSTON FORT WORTH

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

(Continued from Page 89)

WILSON COUNTY

Transcontinental Oil Co.'s No. 1 J. H. Bain, 150 ft. out of E cor. of tract, 1,850 varas from SW line and 75 varas from SE line of Noel F. Roberts Sur. ..... T. D. 2,000 ft.; drlg. in sandy shale.

WILLIAMSON COUNTY

Harlem et al's No. 1 H. H. Stiles, in the J. Bevil Sur., 320 ft. N and 330 ft. E of Sur. ..... Rigging up.

Fred Beatty's No. 1 H. Bland, 450 ft. from N line, 1,000 ft. from E line of tract, in the P. Coursey Sur., 1 mile E from Taylor ..... T. D. 1,176 ft.; shut down.

Fred Beatty's No. 1 J. B. Pumphrey, 1,328 ft. from S and E lines of Mrs. J. B. Pumphrey 158-ac. tract in the W. Cartwright Sur. ..... Rigging up.

M. Bartlett et al's No. 1 R. E. Thomas, 450 ft. from N line, 170 ft. from E line of S 50 of 100-ac. of farm in the H. Owen Sur. ..... Spudded in.

E. L. Chapman's No. 2 J. H. McConnell, 1,070 ft. from W line, 150 ft. from N line of tract in the S. Miller Sur. ..... Rigging up.

Elliot et al's No. 1 S. W. Jones, 400 ft. from W line, 400 ft. from S line of Alvert Nantz Sur. ..... Spudded in.

E. L. Chapman's No. 2 Fuchs, 150 ft. SW line, 750 ft. NW line of 93-ac. tract in the S. Miller Sur. ..... T. D. 1,000 ft.; drlg.

G. B. Peterman's No. 2 J. C. Abbott, 450 ft. from S and W line of Abbott 100-ac. tract, in the Simon Miller Sur., SE from Thrall ..... Rigging up.

Bridwell et al's No. 1 H. L. Martin, 1,150 ft. from N line, 150 ft. from W line of Simon Miller Sur. ..... Rigging up.

McNeil et al's No. 1 R. L. Abbott, 300 ft. NW line, 150 ft. NE line of Abbott 15-ac. tract, in the S. Miller Sur. ..... Spudded in.

Powell & Kykendall's No. 1 Christian Mager, in the W. Byerly Sur., 150 ft. N and 450 ft. E of farms of 150 acres ..... Old well deepening.

E. L. Chapman's No. 1 Barney Lawrence, 330 ft. from SE and SW lines of farm, in the Simon Miller Sur... Rigging up.

E. L. Chapman's No. 1 J. F. McConnell, 150 ft. from S and W of 100-ac. farm in the Simon Miller Sur. .. T. D. 2,136 ft.; small oil show 1,100 ft.

E. R. Ertell's No. 1 J. F. McConnell, 295 ft. from N line, 180 ft. from W of S 50-ac. of 100-ac. farm, in the Simon Miller Sur. ..... T. D. 1,922 ft.; Serpentine; light show oil 1,900 ft.

Keeshan et al's No. 1 R. L. Abbott, 170 ft. from N line, 772 ft. from W line of farm, in the Simon Miller Sur. ..... Derrick up.

E. W. Marts et al's No. 1 R. L. Abbott ..... Spudded in.

Taylor Temple Oil Co.'s No. 1 F. M. Cain, 876 ft. from E line, 150 ft. from N line of C. D. Johnson 109-ac. tract in the S. Miller Sur. ..... Rigging up rotary.

J. A. Thompson's No. 1 T. H. Martin, 150 ft. N and E lines of 20-ac. tract in the S. Miller Sur. ..... Location.

Westheimer & Daube's No. 1 R. L. Abbott, 150 ft. from N and W lines of 57-ac. tract in the S. Miller Sur... Location.

R. R. Wilder's No. 1 H. T. Martin, 158 ft. from N and E lines of H. T. Martin 76.25-ac. tract in the S. Miller Sur. ..... Rigging up rotary.

L. W. Wilson et al's No. 1 W. L. Lawrence, 150 ft. from W line and C N and S of 35-ac. tract or 1,400 ft. from SW line, 1,450 ft. SW line of H. Owens Sur. ... Spudded in.

ZAPATA COUNTY

B. F. Nixon's No. 1 A. Gutierrez, 170 ft. S line, 332 ft. E line, Lot 5, Blk. 8, Partition 10, Borrego grant .. Rigging up.

Penny Prod. Co.'s o. 1 Juan V. Cuellar, Jr., et al, 175 ft. NE line, 175 ft. SE line Poppas Subd., Porcion 33 and 34, Blk. 1, Sur. 2 ..... T. D. 40 ft.; set 12-in. csg. at 40 ft.

Penny Prod. Co.'s No. 1 Trevino, 300 ft. SE line, 200 ft. NE line Marts & Beavers Subd. of Por. 2 and 3, Blk. 6, Sur. 4 ..... T. D. 625 ft.; drlg.

National Oil Co.'s No. 1 D. B. Adams ..... T. D. 1,200 ft.; sand 1,172-80 ft.; set. csg. on packer.

ZAVALA COUNTY

Krebs & Davis' No. 1 Weatheresby, E center of NW of Sec. 44, Blk. A, Adams, Beaty & Mouton Sur., 4 mi. E from Loma Vista ..... T. D. 1,550 ft.; shut down in shale.

Texas Gas Utilities Co.'s No. 6 A. M. West, C of Sur. in the M. Suniga Sur. No. 44 ..... Location.

Weigand Bros.' No. 1 W. L. Gates, Hooper & Wade Sur. No. 13, 1,320 ft. S of N line, 1,220 ft. W of NE cor. Sur., about 16 miles S of Batesville ..... T. D. 2,300 ft. (corrected depth); shut down.

Jack Baldwin's No. 1 J. R. Price, in the W. E. Erskin Sur. No. 34 ..... T. D. 2,260 ft.; drlg. in shale.

Southern Crude Oil Purch. Co.'s No. 1 Nat M. Washer, in the T. Pinckhardt Sur. No. 180, 1 deg. E, 6,795 ft. from SE cor. ..... T. D. 4,736 ft.; plugged and abandoned.

Texas Fuel & Gas Co.'s No. 5 West, 150 ft. from SE line, 4,700 ft. from SW of Marguett Singer Sur., 20 miles SW from Batesville ..... T. D. 1,500 ft.; shut down.

F. Baldwin's No. 1 Washer, 300 ft. S and E of Sec. 34, in the W. E. Erskin Sur. ..... T. D. 3,185 ft.; drlg. in hard shale.

GULF COAST FIELDS AND WILDCATS

(Continued from Page 50)

Sun Oil Co.'s No. 8 Bender, west ..... No report.
Sun Oil Co.'s No. 48 River, north ..... Set 10¾-in. casing 4,377 ft.
Sun Oil Co.'s No. 49 River, north ..... Location.
Trap Shooter Riley's No. 1 Long John Jones ..... Rig.
The Texas Company's No. 23 Wheeler and Pickens, northeast ..... Rig.

BLUE RIDGE—FORT BEND COUNTY

Joe Collins' No. 1 R. C. Duff ..... Drlg. sandy shale showing oil 4,224 ft.
Gulf Production Co.'s No. 18 Luscher, south ..... Rig.
Navarro Oil Co.'s No. 9-A Robinson, west ..... Total depth 5,232 ft.; sidetracking in shale and lime 4,479 ft.
Sinclair Oil & Gas Co.'s No. 1 Simms-Blakely ..... Total depth 6,189 ft.; tested salt water; abandoned.

PIERCE JUNCTION—HARRIS COUNTY

Gulf Production Co.'s No. 32 Taylor ..... Comp. flowing 750 bbls. oil 4,658 ft.
Navarro Oil Co. and Texas Exploration Co.'s No. 19 Dooley, east ..... Cem. casing to test.
Rio Bravo Oil Co.'s No. 12-A Settegast (workover) ..... Testing 5,395 ft.
Rio Bravo Oil Co.'s No. 19-A Settegast ..... Rig.

LIBERTY—LIBERTY COUNTY

The Texas Company's No. 7 Green, northwest ..... Drlg. sticky shale 3,577 ft.

HULL—LIBERTY COUNTY

Republic Prod. Co.'s No. 66 Dolbear (workover) ..... Comp. pumping 200 bbls. oil 2,849 ft.
The Texas Company's No. 2 Barrow ..... Sticky shale; setting 4½-in. screen 3,993 ft.

BIG CREEK—FORT BEND COUNTY

Gulf Production Co.'s No. 58 Davis ..... Abandoned in heaving shale 4,629 ft.

LOST LAKE—CHAMBERS COUNTY

Pure Oil Co.'s No. 11 Mayes ..... Total depth 2,702 ft.; sidetracking in gumbo 1,394 ft.
Pure Oil Co.'s No. 11-A Mayes ..... Location.
Pure Oil Co.'s No. 5 Lost Lake ..... Rig.

NASH—BRAZORIA COUNTY

Rycade Oil Corp.'s No. 15 Wisdom (workover) ..... Abandoned 3,887 ft.
Rycade Oil Corp.'s No. 27 Wisdom ..... Rig.

SOUR LAKE—HARDIN COUNTY

The Texas Company's No. 306 Texas Co. fee ..... Drlg. clay 344 ft.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 85-A Cotton ..... To pump.

GOOSE CREEK—HARRIS COUNTY

Humble Oil & Ref. Co.'s No. 78 Simms-Smith ..... Drlg. shale 138 ft.

SPINDLETOP—JEFFERSON COUNTY

Yount Lee Oil Co.'s No. 23 fee (workover) ..... Comp. pumping 210 bbls. 4,196 ft.
Yount Lee Oil Co.'s No. 8 McFaddin (workover) ..... Pulling screen to deepen 2,541 ft.
Yount Lee Oil Co.'s No. 132 McFaddin ..... Total depth 5,794 ft.; sidetracking 4,746 ft.
Yount Lee Oil Co.'s No. 136 McFaddin ..... Abandoned 3,834 ft.
Yount Lee Oil Co.'s No. 137 McFaddin ..... Drlg. 3,410 ft.
Yount Lee Oil Co.'s No. 138 McFaddin ..... Drlg. 3,605 ft.
Yount Lee Oil Co.'s No. 140 McFaddin ..... Rig.
Yount Lee Oil Co.'s No. 1 Greer & Hall ..... Comp. flowing 720 bbls. oil 3,798 ft.
Yount Lee Oil Co.'s No. 33 Gladys City ..... Drlg. gumbo 4,020 ft.

NORTH DAYTON—LIBERTY COUNTY

Victor Oil Co.'s (V. H. Borsodi) No. 2 Gulf ..... Drlg. shale 4,750 ft.
Houtex Oil Co.'s No. 1 Simmons & Brown ..... Set 1 joint screen; comp. flowing 50 bbls. oil 4,768 ft.
Houtex Oil Co.'s No. 2 Wilhite ..... Drlg. sand and shale 4,695 ft.
Harrison Oil Co.'s No. 5 Quintette ..... Location.
The Texas Company's No. 1 Paraffine fee ..... Drlg. sandy shale 5,535 ft.

HIGH ISLAND—GALVESTON COUNTY

Gulf Production Co.'s No. 10 Smith ..... Total depth 3,821 ft.; fishing drill stem.
Marrs McLean's No. 18 Cade ..... Drlg. hard sand and lime 3,826 ft.

ORCHARD—FORT BEND COUNTY

Gulf Production Co.'s No. 23 Moore ..... Drlg. shale 2,144 ft.
Gulf Production Co.'s No. 24 Moore ..... Drlg. sand and shale 2,400 ft.

ESPERSON—LIBERTY COUNTY

Cranfill-Reynolds Oil Co.'s No. 5 Esperson ..... Oil sand and shale 5,405-35 ft.
Cranfill-Reynolds Oil Co.'s No. 13 Esperson ..... Oil sand 3,283 ft.; cem. 6⅝-in. casing.
Cranfill-Reynolds Oil Co.'s No. 14 Esperson ..... Rig.
Cranfill-Reynolds Oil Co.'s No. 4 Davis ..... To pump 2,347 ft.
Cranfill-Reynolds Oil Co.'s No. 1 Vajdak (workover) ... Drlg. shale 7,209 ft.
Cranfill-Reynolds Oil Co.'s No. 3 Moores Bluff ..... Drlg. shale 920 ft.
Cranfill-Reynolds Oil Co.'s No. 1-B Moores Bluff ..... Rig.
Republic Production Co.'s No. 1 Moores Bluff ..... Drlg. hard sand 4,602 ft.
Yount Lee Oil Co.'s No. 3 Moores Bluff ..... Drlg. hard shale and lime 6,775 ft.

HANKAMER—LIBERTY COUNTY

Gulf Production Co.'s No. 7 Boyt ..... Drlg. gumbo 3,152 ft.
Gulf Production Co.'s No. 8 Boyt ..... Drlg. gumbo and lime 1,563 ft.
Gulf Production Co.'s No. 1 Ezzell ..... Spudded.

WEST COLUMBIA—BRAZORIA COUNTY

Anderson et al's No. 1 Smith & Brooks ..... Drlg. shale 1,108 ft.

MARKHAM—MATAGORDA COUNTY

Hamil Drilling Co.'s No. 1 Meyers ..... Drlg. sandy shale 3,350 ft.

BOLING—WHARTON COUNTY

C. S. Thomas' No. 1 Volney ..... Rig.
C. S. Thomas' No. 1 Taylor ..... Drlg. gumbo 725 ft.

REFUGIO—REFUGIO COUNTY

Houston Oil Co.'s No. 1 O'Brien, Block 5 ..... Swabbing 5,427 ft.
Houston Oil Co.'s No. 3 Ryals ..... Cem. 12½-in. casing 484 ft.
Houston Oil Co.'s No. 1 Rooke ..... Location.
Houston Oil Co.'s No. 1 Strauch, Block 20 ..... Blowing wild; sand 5,468 ft.
Houston Oil Co.'s No. 1 City, Block 59 ..... Shut down 1,421 ft. because of No. 1 Strauch wild well.
Houston Oil Co.'s No. 1 O'Connor ..... Changing rigs 512 ft.
Houston Oil Co.'s No. 1 West ..... Drlg. shale and lime 5,204 ft.
Houston Oil Co.'s No. 1 Rose Lambert ..... Oil sand 5,892-5,901 ft.; cem. 6⅝-in. casing 5,887 ft.
Houston Oil Co.'s No. 2 Rose Lambert ..... Drlg. sticky shale 4,276 ft.
Houston Oil Co.'s No. 1-A Fannie Heard ..... Total depth 5,370 ft.; cem. 6⅝-in. casing 5,357 ft.
Houston Oil Co.'s No. 13 P. H. Rooke ..... Oil sand 3,703-10 ft.; drlg. plug.
Houston Oil Co.'s No. 7 Fannie Heard (workover) ..... Oil sand 3,630-85 ft.; cem. casing.
Houston Oil Co.'s No. 1 Johnson, Block 63 ..... Shut down 1,157 ft. because of No. 1 Strauch wild well.
Independent Oil Co.'s No. 1-B J. F. B. Heard (workover).. Oil sand 3,650-55 ft.; drlg. plug.
Independent Oil & Gas Co.'s No. 2-C J. F. B. Heard ..... Sand 3,680-90 ft.; swabbing.
Independent Oil & Gas Co.'s No. 1 Mitchell ..... Derrick.
Independent Oil Co.'s No. 1 Mercy Academy ..... Plugged from 5,478 ft. to 5,382 ft.; swabbing.
Independent Oil & Gas Co.'s No. 1 Shelly (workover) ... Drlg. sticky shale 6,430 ft.
Independent Oil & Gas Co.'s No. 6 Jerry Reilly (workover) ..... Drlg. shale 4,949 ft.
Edwin M. Jones' No. 3-A J. F. B. Heard ..... Tested salt water 3,676 ft.; plugging off.
Edwin M. Jones' No. 4-A J. F. B. Heard ..... Tested salt water 3,661 ft.
Larco Co.'s No. 5 Strauch ..... Cored sand 3,642 ft.
Luling Oil & Gas Co.'s No. 1 J. W. Kay ..... Set 10-ft. screen; tested salt water; drlg. deeper 3,758 ft.
Luling Oil & Gas Co.'s No. 1 West ..... Rig.
Mission Drilling Co.'s No. 1 Holmes Heard ..... Oil sand 3,685-98 ft.; cem. 9⅝-in. casing 3,686 ft.
Mission Drilling Co.'s No. 1 Joe Shay, Block 6 ..... Drlg. gumbo and sand 4,229 ft.
Mission Drilling Co.'s No. 1 O'Brien ..... Comp. flowing 300 bbls. oil 5,471 ft.
Moody-Seagraves Prod. Co.'s No. 2 O'Brien ..... Blew out 5,670 ft.; running wild.
Moody-Seagraves Prod. Co.'s No. 1-A O'Brien ..... Derrick.
Moody-Seagraves Prod. Co.'s No. 3 O'Brien ..... Derrick.
Moody-Seagraves Prod. Co.'s No. 8 O'Brien ..... Rig.
Moody-Seagraves Prod. Co.'s No. 1 Strauch, Block 64 .... Drlg. sticky shale 1,813 ft.
Morgan Oil Corp.'s No. 1 St. John ..... Abandoned 6,606 ft.
Morgan Oil Corp.'s No. 1 O'Connor ..... Set 16 joints screen 5,471 ft.; comp. dry gas well 1,550 ft.; ¾-in. choke.
Morgan Oil Corp.'s No. 2 O'Connor ..... Set 15 joints screen 5,389 ft.; swabbing.
Morgan Oil Corp.'s No. 4 O'Connor ..... Oil sand 5,448-56 ft.; cem. 8¼-in. casing 5,356 ft.
Pearson Properties, Inc.'s No. 1 Hornburg ..... Rig.
Pearson Properties, Inc.'s No. 2 Ryals ..... Oil sand 5,706-18 ft.; cem. casing.
Pearson Properties, Inc.'s No. 1 Tobe Wood ..... Drlg. sticky shale and lime 4,637 ft.
Ed Price's No. 1 Mission River ..... Set screen 3,663 ft.
Saxet Oil Co.'s No. 12 Clint Heard ..... Drlg. gumbo and lime 1,828 ft.
Saxet Oil Co.'s No. 1 Kay ..... Changing rig 414 ft.
L. L. Smith's No. 1 Sumner ..... Rig.
Sun Oil Co.'s No. 5 Buckley ..... Oil sand 3,699-3,704 ft.; cem. 8¼-in. casing 3,658 ft.
The Texas Company's No. 2 Ben Shelton ..... Spudded.
Union Producing Co.'s No. 4 Morgan-Vance ..... Comp. flowing 200 bbls. daily 3,695 ft.
Union Producing Co.'s No. 5 O'Brien ..... Drlg. hard broken lime 5,135 ft.
Union Producing Co.'s No. 6 O'Brien ..... Derrick.
Union Producing Co.'s No. 4 Powers ..... Drlg. shale 5,691 ft.
Union Producing Co.'s No. 5 Powers ..... Location.
Union Producing Co.'s No. 5 Mitchell ..... Rig.
Union Producing Co.'s No. 2 Eskridge-Heard ..... Rig.
Union Producing Co.'s No. 3 J. F. B. Heard ..... Swabbing 3,657 ft.

SOUTH LOUISIANA FIELDS

LOCKPORT—CALCASIEU PARISH

Union Sulphur Co.'s No. 2 Moss ..... Drlg. water sand 3,485 ft.
Union Sulphur Co.'s No. 1 Martha Moss ..... Drlg. sand and gravel 1,136 ft.

Vacuum Oil Co. and Gulf Ref. Co.'s No. 26 Miller ..... Comp. flowing 800 bbls. pipe line oil on two ¼-in. chokes, pressure 1,300 lbs., 4,386 ft.
Vacuum Oil Co. and Gulf Ref. Co.'s No. 28 Miller ..... Rig.
Vacuum Oil Co. and Gulf Ref. Co.'s No. 29 Miller ..... Location.
Vacuum Oil Co. and Gulf Ref. Co.'s No. 5 Freiberg & Wolf ..... Oil sand 4,339 ft.; making drill stem test.
Vacuum Oil Co. and Gulf Prod. Co.'s No. 7 Farquahar ..... Drlg. sandy shale 3,789 ft.
Vacuum Oil Co.'s No. 6 Bayou State ..... Building bridge to location.
Yount Lee Oil Co.'s No. 1 Miller ..... Drlg. gumbo 1,504 ft.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 19 Watkins ..... No report.
Duhon Oil & Mineral Co.'s N. 1 Koonce ..... No report.
Gulf Refining Co.'s No. 1 Erwin ..... Drlg. 3,210 ft.
The Texas Company's No. 7 State ..... Building derrick.
Yount Lee Oil Co.'s No. 1 Portia ..... Reaming to set casing 3,664 ft.
Yount Lee Oil Co.'s No. 3 R. Vincent ..... Total depth 3,716 ft.; setting casing.

JENNINGS—ACADIA PARISH

Abshire-Bolyard's No. 6 Jennings ..... Location.
The Texas Company's No. 5 Rayne heirs, King tract ... Drlg. rock 8,225 ft.
Yount Lee Oil Co.'s No. 7 Crowley ..... Drlg. 3,786 ft.

VINTON—CALCASIEU PARISH

Emerson-Moore's No. 1 Gray estate ..... Location.
Gulf Refining Co.'s No. 2 Gardner ..... Total depth 3,780 ft.; sidetracking 1,905 ft.
Gulf Refining Co.'s No. 3 Gardner ..... Drlg. 2,306 ft.

BAYOU BOUILLON—ST. MARTIN PARISH

Rycade Oil Corp.'s No. 1 Woodyard Lake ..... Drlg. sandy shale 4,683 ft.
Rycade Oil Corp.'s No. 10 Bouillon fee ..... Drlg. hard shale and lime 3,810 ft.

STARKS—CALCASIEU PARISH

Adams Oil Co.'s No. 1 Roderick ..... No report.
J. O. Davis' No. 1 Industrial ..... Standing 3,775 ft.
Gulf Refining Co.'s No. 23 Lutcher-Moore ..... Set strainer 1,149 ft.

SWEET LAKE—CAMERON PARISH

Magnolia Petroleum Co.'s No. 1 Sweet Lake ..... Drlg. 1,604 ft.
Pure Oil Co.'s No. 9 Yount Lee ..... Drlg. sand 6,493 ft.

ANSA LA BUTTE—ST. MARTIN PARISH

Yount Lee Oil Co.'s No. 2 Herbert ..... Sand showing oil 4,376 ft.

PORT BARRE—ST. LANDRY PARISH

Gulf Refining Co.'s No. 3 Hoskins ..... Drlg. sandy shale 3,176 ft.
Alex Rice, trustee's No. 1 Futral ..... Tested salt water 4,497 ft.; waiting orders.
Pure Oil Co.'s No. 1 Perkins ..... Drlg. sand and rock 1,065 ft.
The Texas Company's No. 8 Botany Bay ..... Drlg. gumbo 2,603 ft.

MISCELLANEOUS WILDCATS

TEXAS

AUSTIN COUNTY

Black Oil Co.'s No. 1 Lancashire, near Sealey ..... Fishing drill stem 4,247 ft.
O'Hara et al's No. 1 Batla, near Raccoon City ..... Shut down 4,000 ft.

BRAZORIA COUNTY

The Texas Company's No. 1 Ewin, Harvey Little Sur. .... Total depth 5,511 ft.; waiting orders.
Mills Bennett Production Co.'s No. 1 Random, Allen .... Pulling screen; total depth 5,365 ft.
Mills Bennett Production Co.'s No. 1 Reese, Allen ..... Rig.
Cullen & West's No. 1 Ward, Damon Mound ..... Drlg. gumbo 3,152 ft.
Faust et al's No. 5 Faust ..... Drlg. shale 4,200 ft.
Freeport Sulphur Co.'s No. 2,001 fee, Bryan Heights .... Cem. 20-in. casing 80 ft.
Layne et al's No. 6 Wisdom, Damon Mound ..... Total depth 2,404 ft.; sand showing oil 2,316-34 ft.; set screen.
Rucks & Patterson's No. 1 Hunter, southwest of Hoskins.. Total depth 1,180 ft.; sidetracking in rock 960 ft.
Rycade Oil Corp.'s No. 1 Rapid City, Henry Austin Sur... Drlg. shale and shell 5,556 ft.
Shell Petroleum Corp.'s No. 1 Blakely-Winston, Danbury ..... Shut down 1,567 ft.
Shell Petroleum Corp.'s No. 3 Blakely-Winston, Danbury.. Spudded.
Shell Petroleum Corp.'s No. 3 Proebste, Clemens ..... Drlg. gumbo and lime 546 ft.
Steel & Strickland's No. 1 Lockridge ..... Spudded and shut down.
United Oil Syndicate's No. 1 Moores, Francis Moore Sur. ..... Drlg. shale 1,200 ft.

CALHOUN COUNTY

The Texas Company's No. 1 Thomas, J. P. Tilley Sur..... Drlg. clay 802 ft.

CHAMBERS COUNTY

Chicago Oil Corp.'s No. 1 Lawrence ..... Shut down 3,810 ft.
Shell Petroleum Corp.'s No. 1 Herff, Moss Bluff ..... Drlg. brittle shale and sand 5,608 ft.
Pure Oil Co.'s No. 1 Kirby, Charles Tilton Survey ..... Drlg. sandy lime 6,192 ft.
Pure Oil Co.'s No. 1 J.H.K. Ranch, Oyster Bayou ..... Total depth 3,724 ft.; reaming.
Superior Oil Corp.'s No. 1 Jackson ..... Changing rigs 3,865 ft.
The Texas Company's No. 1 Jackson, T.&N.O. Sur., Sec. 17 ..... Cem. 13⅜-in. casing 1,138 ft.

COLORADO COUNTY

Gulf, Humble and Penn's No. 1 Wilson, John McCroskey Sur. ..... Drlg. shale 3,267 ft.

GRIMES COUNTY

Cranfill-Reynolds Oil Co.'s No. 1 Stoneham, Navasota ... Drlg. shale 1,615 ft.
Deering & Noble's No. 1 Templeman, 6 miles south Navasota ..... Spudded.

HARDIN COUNTY

D. O. Speights' No. 1 fee, near Batson ..... Drlg. gumbo 2,000 ft.

HARRIS COUNTY

Baldwin and associates' No. 1 Kitzman, Cypress ..... Shut down 4,247 ft.
Bert & Griffin's No. 1 Milroy, Aldine ..... Abandoned in gumbo 2,056 ft.
Cranfill-Reynolds Oil Co.'s No. 1 Rorick, J. Ogburn Sur... Drlg. shale and sand 5,025 ft.
Humble Oil & Ref. Co.'s No. 7 Warren, Hockley ..... Drlg. sandy shale 6,972 ft.
Humble Oil & Ref. Co.'s No. 3 Minnetex, Mykawa ..... Spudded.
Sloan Prospecting Co.'s No. 1 Davis, Cedar Bay ..... Drlg. sticky shale 5,824 ft.
Strang Oil Co.'s No. 1 Good, Deer Park ..... Drlg. sand 6,012 ft.

JASPER COUNTY

Helmerich & Payne, Inc.'s No. 1 C. L. Flourney ..... Location.

JACKSON COUNTY

Jackson County Oil Syndicate's No. 8 Drushell, Edna ... Drlg. shale and lime 3,010 ft.
The Texas Company's No. 1 C. A. Mitchell, G. Ewing. Sur. ..... Drlg. shale 5,169 ft.

JEFFERSON COUNTY

Deep Test Oil Co.'s No. 1 McFaddin, Chaisson Sur. ..... Drlg. lime 4,600 ft.
Gulf Production Co.'s No. 2-A Junker, Fannett ..... Drlg. 4,169 ft.
The Texas Company's No. 3 Pipkin, Big Hill ..... Pulled strainer 1,414 ft.; drlg. deeper.
Westbury Oil Co.'s No. 1 West, Choate Sur. ..... Drlg. gumbo 3,205 ft.

LIBERTY COUNTY

Gulf Production Co.'s No. 1 McFaddin, Moss Bluff ..... Sand and shale showing oil 5,759-77 ft.; cmtd. 6⅝-in. csg. 5,750 ft.
Humble Oil & Ref. Co.'s No. 1 Sabine Tram, Devers .... Drlg. sand 4,996 ft.
Tucker et al's No. 1 Bell, Devers ..... Derrick.

MATAGORDA COUNTY

Cockburn et al's No. 1 Hawkins, Shepherds Mott ..... Drlg. heaving shale 6,150 ft.
Watts Oil Co.'s No. 1 Titus, Wheelright Sur. ..... Drlg. shale and shell 2,859 ft.

MONTGOMERY COUNTY

Kelley-Kaker's No. 2 Guerges ..... Shut down 1,915 ft.

ORANGE COUNTY

Gulf Production Co.'s No. 1 W. R. Starks, Port Neches... Tested salt water 4,389 ft.; pulling screen to deepen.
The Texas Company's No. 2 Kuhn, Port Neches ..... Drlg. water sand 4,171 ft.
The Texas Company's No. 2 Stark, Port Neches ..... Drlg. sand, shale and lime 4,356 ft.

WALKER COUNTY

Texas State Oil Co.'s No. 2 Foils, H.&T.C. Sur., Abstract 287 ..... No report.
Humble Oil & Refining Co.'s No. 1 J. N. Taub, B.B.B.& C. Sur. ..... Abandoned in sticky shale 1,035 ft.
Kirby Pet. Co.'s No. 2 Rogers, San Felipe ..... Rig.
W. P. Morris' No. 1 Chapman, Donoho Sur. ..... Shut down 2,075 ft.

WASHINGTON COUNTY

W. Birdwell's No. 1 Schram, James Walker Sur. ..... Shut down 2,110 ft.
Clifton et al's No. 1 Pruiss, E. Alcorn Sur. ..... Drl. shale 1,261 ft.
Mid-Kansas Oil & Gas Co.'s No. 1 Cuscamp, B. F. Sanders Sur. ..... Abandoned in lignite 3,514 ft.
Sun Oil Co.'s No. 9 Grote, Clay Creek ..... Drlg. rock 2,076 ft.
Sun Oil Co.'s No. 4 Clay, Clay Creek ..... Drlg. shale 2,660 ft.
Sun Oil Co.'s No. 5 Hunt, Clay Creek ..... Rig.
Sun Oil Co.'s No. 5 Janner, Clay Creek ..... Rigging up to pump.

SOUTH LOUISIANA

ACADIA PARISH

Charles P. Siess' No. 1 Roller, Sec. 8-9s-1e ..... No report.

CALCASIEU PARISH

Wilfred Lahay's No. 2 James ..... Standing 3,970 ft.

CAMERON PARISH

Shell Petroleum Corp.'s No. 15 Watkins, Black Bayou ... Location.
Shell Petroleum Corp.'s No. 1 State, Black Bayou ..... Rig.
Vacuum Oil Co.'s No. 1 Cameron Meadows, Sec. 21-14s-13w ..... Total depth 3,953 ft.; fishing drill stem.
The Texas Company's No. 6 State, Calcasieu Lake ..... Building derrick.

IBERIA PARISH

Lake Oil Co.'s No. 1 Ben White, Sec. 54-12s-7e ..... Shut down 1,500 ft.
Jefferson Lake Oil Co.'s No. 7 Lake Peigneur, Jefferson Lake ..... Location.
Jefferson Lake Oil Co.'s No. 8 Lake Peigneur, Jefferson Lake ..... Location.
The Texas Company's No. 5 Vermillion Bay ..... Drlg. 2,621 ft.

IBERVILLE PARISH

Shell Petroleum Corp.'s No. 5 Wilbert, White Castle .... Rig.
Standard Oil Co.'s No. 5 Schwing, Bayou Blue ..... Drlg. 1,605 ft.
Standard Oil Co.'s No. 5 Wilbert, Bayou Blue ..... Drlg. 2,602 ft.
Standard Oil Co.'s No. 7 Wilbert ..... Derrick.
Standard Oil Co.'s No. 8 Wilbert ..... Derrick.
Standard Oil Co.'s No. 2 Case, Bayou Des Glaise ..... Location.

JEFFERSON PARISH

Humble Oil & Ref. Co.'s No. 1 Delaware, Sec. 2-16s-23e.. Drlg. sand 1,900 ft.

JEFFERSON DAVIS PARISH

Shell Petroleum Corp.'s No. 1 Heyd, Iowa ..... Location.
M. L. Vincent's No. 1 Richards, Sec. 22-7s-3w ..... Drlg. 2,826 ft.

LAFAYETTE PARISH

Pure Oil Co.'s No. 1 Marmetin, Carenero ..... Drlg. sand 2,834 ft.

LA FOURCHE PARISH

The Texas Company's No. 1 Leesville ..... Total depth hard sand 5,429 ft.; casing collapsed at 600 ft.

PLAQUEMINE PARISH

Humble Oil & Ref. Co.'s No. 1 Lake Washington, Lake Grand Ecaille ..... Total depth 5,152 ft.; milling out
Humble Oil & Ref. Co.'s No. 2 Cockrell-Moran, Lake Grand Ecaille ..... Location.
Humble Oil & Ref. Co.'s No. 3 Cockrell, Lake Grand Ecaille ..... Drlg. sticky shale 1,051 ft.
The Texas Company's No. 4 State, Garden Island ..... Set casing 700 ft.

ST. LANDRY PARISH

Herbert-Baker Oil Co.'s No. 1 Fisher, Sec. 10-3S-4e ..... No report.

ST. MARTIN PARISH

The Texas Company's No. 3 St. Martin, Hager ..... Drlg. 2,896 ft.

ST. MARY PARISH

Louisiana Land & Exploration Co.'s No. 1 Fox, Berwick.. Rigging.
Pure Oil Co.'s No. 2 Wax Lake, Sec. 12-17s-9e ..... Drlg. sticky shale 5,194 ft.
The Texas Company's No. 1 South Coast, Sec. 41-14s-10e.. No report.

TERREBONNE PARISH

Freeport Sulphur Co.'s No. 1 Nelson, Sec. 12-21s-11e .... Shut down 6,025 ft.
Charles Paggi's No. 2 Evergreen, Sec. 145-15s-16e ..... Standing 1,818 ft.
The Texas Company's No. 4 State-Bay St. Elaine ..... Drlg. deeper 5,186 ft.
The Texas Company's No. 3 State, Caillou Island ..... Rig.
The Texas Company's No. 4 State, Lake Barre ..... Cmtd. 6⅝-in. csg. 3,660 ft.
The Texas Company's No. 3 State, Dog Lake ..... Location.
The Texas Company's No. 4 La. L & E. Four Isle ..... Derrick.
The Texas Company's No. 2 State, Lake Pelto ..... Rig up to work over.

SOUTHWEST TEXAS

(Continued from Page 48)

Nordan & Morris' No. 2 "A" I. G. Trevino, 150 feet southwest line, 150 feet northwest line, Block 6, Survey 65; total depth 1,254 feet; flowed 225 bbls. through three-eighths-inch choke. H. Muckelroy, Jr.'s No. 3 Trevino, 460 feet south line, 330 feet east line, Block 25, Survey 412; total depth 1,292 feet; estimated 100 bbls. Alamo Drilling & Leasing Co.'s No. 1 Trevino, 450 feet west line, 150 feet south line, Block 1, Survey 66; total depth 1,260 feet; 75 bbls. Alamo Drilling & Leasing Co.'s No. 2 Trevino, 500 feet east line, 150 feet north line, Block 1, Survey 66; total depth 1,248 feet; flowing 3 bbls. per hour.

ABANDONED TESTS

Cole Pool—Duval County

John J. O'Hern's No. 1 Benavides, 510 feet southwest line, 150 feet northwest line, O'Hern & Seacord Subdivision, Mesquite grant, Block 8, Survey 174; location abandoned.

Albercas Pool—Webb County

O. W. Killam's No. 2 Bruni, 575 feet north line, 871 feet east line, Brown Subdivision, Block 33, Albercas grant; total depth 2,424 feet; abandoned.

Jennings Pool—Zapata County

O. W. Killam's No. 23 Cuellar, 150 feet northeast line, 28 feet northwest line of May & Holder's 80-acre tract, or 4,765 feet northwest line of Cerrito Blanco grant; total depth 2,324 feet; abandoned.

Buchanan Pool—Caldwell County

Ed Lange and others' No. 1 Geoffery, 745 feet south-north line, 150 feet east-west line of lease, or 1,776 feet east-west line, 3,496 feet south-north line of survey in the C. M. Cannon Survey; total depth 2,460 feet; abandoned.

Pettus Field—Bee County

Trinity Drillers' No. 1 LeRoy Roberts, adjoining townsite of Pettus; total depth 3,920 feet; abandoned.

NEW LOCATIONS

Dobrowolski Pool—Bexar County

Penn-Tex Oil Co.'s No. 3 Sandemeyer, 300 feet west of No. 2 in the M. Menchaca Survey; spudded in.

Kohler Pool—Duval County

Humble Oil & Refining Co.'s No. 4 Kohler, 1,155 feet east line, 330 feet south line, Survey 172; location.

Cole Pool—Webb County

Magnolia Petroleum Co.'s No. 3 A Benavides, 550 feet north line, 150 feet east line, Survey 660; rigging up.

Jennings-Cuellar—Zapata County

O. W. Killam's No. 21-C Cuellar, 84 feet east of northwest corner, 500 feet south of north line, Survey 278; spudded in. O. W. Killam's No. 20-B Cuellar 1,430 feet south line, 3,340 feet east line Survey 277; spudded in.

Jennings-Muckelroy—Zapata County

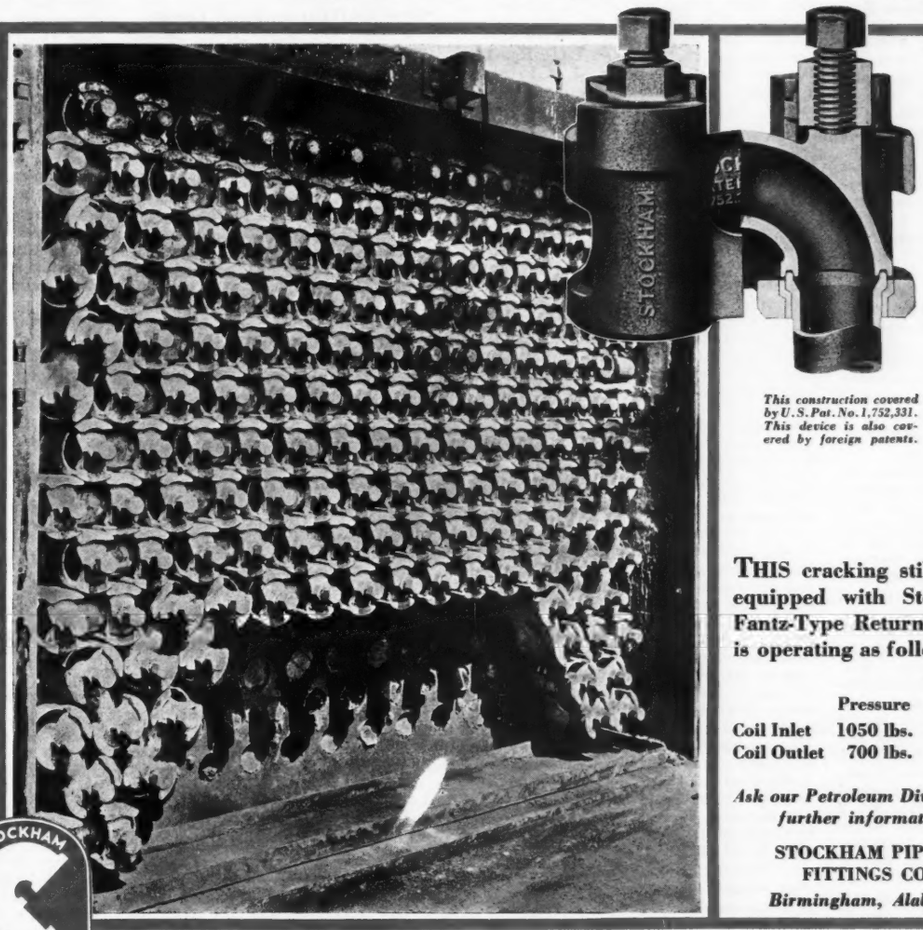
Nordan & Morris' No. 3-A I. G. Trevino, 490 feet northwest line, 150 feet southwest line, Block 6, Survey 65; rigging up. Nordan & Morris' No. 4-A I. G. Trevino, 450 feet southwest line, 150 feet northwest line, Block 6, Survey 65; derrick. W. R. Shankle's No. 3 M. Trevino, 150 feet northwest line, 150 feet northeast line, Block 14, Survey 65; derrick. S. R. C. Co.'s No. 1 F. Cuellar, 150 feet northwest line, 150 feet northeast line, Block 7, Survey 65; derrick. Nordan & Morris-Allen & Morris' No. 2 E. Gutierrez, 4,263 feet southeast line, 750 feet northeast line, Share 4, Fanale Partition, Comitas grant; derrick. Nordan & Morris' No. 2-B M. Trevino, 1,55 feet southwest line, 150 feet northwest line, Block 15, Survey 65; location. Edgington & Niles' No. 1-B I. G. Trevino, 150 feet southwest line, 150 feet southeast line, Block 4, Survey 65; spudded in. Grimm & Yakey's No. 1 M Trevino, 510 feet north line, 150 feet west line, Block 5, Survey 412; derrick.

Pettus Pool—Bee County

Glasscock Brothers' No. 2 Pettus Town site, center of block 24; spudded in. Houston Oil Co.'s No. 1 Pettus Town site, center of block 21; derrick. Houston Oil Co.'s No. 2 Pettus Townsite, center of Block 23; location. Houston Oil Co. No. 3 Pettus Townsite, center of Block

Completely equipped with STOCKHAM RETURN BENDS

TYPICAL OF SUCCESSFUL COMMERCIAL OPERATION



This construction covered by U. S. Pat. No. 1,752,331. This device is also covered by foreign patents.

THIS cracking still, fully equipped with Stockham Fantz-Type Return Bends, is operating as follows:

	Pressure	Temperature
Coil Inlet	1050 lbs.	640° F
Coil Outlet	700 lbs.	922° F

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for every oil requirement
ELECTRIC CAST STEEL—CAST IRON—MALLEABLE

33; location. Houston Oil Co.'s No. 4 Pettus Townsite, center of Block 35; location. T. B. Slick's No. 1 B. Hodges, center of Block 37 in the G. Kerr Survey; location. S. R. C. Co.'s No. 1 A. Theis, 2,700 feet north line, 300 feet west line of 782-acre tract, in the R. S. Burns Survey; location.

DRILLING ACTIVITY

Darst Creek—Guadalupe County

Empire Gas & Fuel Co.'s No. 3 Dowdy, 792 feet north line, 150 feet east line of tract, in the J. C. Darst Survey; derrick. Same company's No. 5 Dowdy, 792 feet north line, 150 feet east line of tract, in the J. C. Darst Survey; derrick. Gulf Production Co.'s No. 2 Malear, 450 feet southwest line, 150 feet northwest line, 72-acre tract, in the J. R. Robinson Survey; derrick. Same company's No. 5 Posey, 150 feet from south and west lines of tract, in the J. R. Robinson Survey; location. Same company's No. 4 Posey, 488 feet southwest line, 150 feet southeast line of 71-acre tract, in the J. R. Robinson Survey; location. Magnolia Petroleum Co.'s No. 3 L. V. Echols, 2,400 feet to southwest line, 1,100 feet to southeast line of farm, in the James Hodges Survey; location. Trinity Drillers' No. 1 H. G. Goldman, 150 feet northwest line, 150 feet southwest line of 47-acre tract, in the J. B. Alexander Survey; location.

Dobrowolski Pool—Bexar County

Eckert & Son's No. 6 Sandemer, 400 feet west of No. 5, Survey 52; total depth 400 feet; drilling.

Bruner Pool—Caldwell County

Eastland Oil Co.'s No. 1 C. F. Dye, 150 feet from south and east lines, in the J. Hinds Survey; total depth 2,502 feet; setting 6⅝-inch casing. Gulf Production Co.'s No. 4 T. Briscoe, 150 feet north of center of south line of 100-acre tract, in the Raines-McCarley Survey; derrick.

Pettus Area—Bee County

Barnsdall Oil Co.'s No. 1 Roberts, 300 feet each way out of northwest corner of 225-acre lease, in the George A. Kerr Survey; total depth 3,646 feet; set casing. Batex Oil Co.'s No. 1 Mrs. H. J. Burns, 360 feet from north line, 300 feet east line of north 100 acres of 300-acre farm, in the John Pace Survey; total depth 2,675 feet; drilling in sandy shale. Cosden Oil Co.'s No. 2 McKinney, 860 feet south line, 300 feet east line of tract, in the south John Pace Survey; total depth 2,750 feet; drilling. Same company's No. 3 McKinney, 360 feet south line, 800 feet east line of tract, in the south John Pace Survey; total depth 300 feet; drilling. Grayburg Oil Co.'s No. 1 S. D. Copeland, 150 feet southeast corner of north half of William Sanford Survey; derrick. Same company's No. 2 Kimball, 150 feet each way from southwest corner of 80-acre tract or 2,700 feet to east line, 2,100 feet to south line of Stephen Winship Survey; derrick. George A. Henshaw, Jr.'s No. 1 Beck, 150 feet to north line, 150 feet to west line of Lot 2, Hicks-Hall Cotton Subdivision, in the M. Urango Survey; total depth 2,300 feet; drilling in shale. Houston Oil Co.'s No. 1 J. R. Beasley, center of Block 36, Pettus Townsite; total depth 3,903 feet; set casing. Same company's No. 1 Newman, 300 feet from south line, 300 feet west line of 197-acre tract, offset to Cosden's well, in the J. A. Kerr Survey; total depth 1,740 feet; drilling in shale and sand. Humble Oil & Refining Co.'s No. 4 McKinney, 1,100 feet northwest corner, 250 feet northeast line of the L. C. Randolph Survey; total depth 1,317 feet; drilling in sticky shale. Same company's No. 5 McKinney, 150 feet south of south line of Pettus Townsite, direct offset to Houston Oil Co.'s No. 1 Beasley, in the G. A. Kerr Survey; spudding. Edward M. Jones' No. 1 Rapp, 990 feet southeast of northwest corner of Section 11 of Ragley Subdivision, Jose Maria Uranga Survey; total depth 4,300 feet; drilling in hard shale. Long & Mimms' No. 1 Billingsley, 155 feet to south and west lines of Billingsley 50 acres out of 150-acre tract, in the J. Poitevent Survey; location. Nichols Oil Corp.'s No. 4 Hicks, 550 feet east of west line, 430 feet south of north line of Block 20, 930 feet due south of No. 3 Hicks, Jose Maria Uranga Survey; total depth 1,610 feet; drilling in sticky shale. Osage Oil Co.'s No. 1 Maudlin, 155 feet to north line, 155 feet to east line of east 50 acres of 200-acre tract, in the J. Poitevent Survey; spudded in. Same company's No. 2 Maudlin, 155 feet north line, 505 feet east line of tract, in the J. Poitevent Survey; derrick. Jean Patton's No. 1 Billingsley, 155 feet west line, 2,250 feet south line of Billingsley 30 acres in the B. Q. Hadley Survey; location. Ed Price's No. 1 Mrs. Laura E. Weiss, 200 feet out of the northwest corner of B.&B. 640-acre survey, east of Normanna, 6 miles west of Blanco Creek; total depth 3,910 feet; shut down.

Rio Bravo Oil Co.'s No. 1 S.A.A.P. Railway, 58 feet north of south line, 120 feet west of west line of Block 3, Pettus Townsite, in the G. A. Kerr Survey; rig up. Same company's No. 2 S.A.A.P. Railway, center of A. Smalley Survey; location. Same company's No. 3 S.A.A.P. Railway, 120 feet west of west line, Blocks 3 and 58, in the G. A. Kerr Survey; rigging up. S. R. C. Co.'s No. 1 Townsite, center of Block 37 of Pettus Townsite; location. Southerland and others' No. 1 Billingsley, 155 feet to south line, 155 feet to west line of 40 acres off north end of 150 acres, in the B. Q. Hadley Survey; derrick. Southern Crude Oil Purchasing Co.'s No. 1 M. Dahl, 887 feet from east line, 1,584 feet from north line of Mena Dahl 224-acre tract, in the George Pagen Survey; total depth 410 feet; drilling plug and making hole. Swift and others' No. 1 Maudlin, 155 feet to north and east lines of 10-acre tract out of the Maudlin west 125 acres, in the J. Poitevent Survey; location. The Texas Company's No. 2 J. R. Scott, 200 feet from north line, 150 feet from west line, in the J. M. Urango Survey; total depth 620 feet; drilling. Union Production Co.'s No. 10 George Ray, 150 feet north, 150 feet east of the southwest corner of Block 240, G. Neil Survey; location. Same company's No. 11 George Ray, 3,200 feet southwest of north corner along northwest line, 300 feet southeast at right angles from northwest line, in the R. G. Millican Survey; total depth 3,815 feet; plugging to abandon. Same company's No. 13 George Ray, 900 feet due south of Union Production Co.'s No. 1 Ray gas well, in the George Habbermacher Survey; rigging up. Same company's No. 14 George Ray, 600 feet southeast of No. 5 Ray, 250 feet northeast at right angles from south line of survey, in the T. Hanson Survey; total depth 2,493 feet; drilling in sand and boulders. Same company's No. 15 Ray, 150 feet south line, 150 feet east line of southeast corner Pettus Townsite, offset to Houston Oil Co.'s No. 1 Beasley; rigging up. Same company's No. 16 Ray, 150 feet east of Pettus Townsite, offset to Glasscock's No. 1 in Block 41; spudding in. H. H. Weinert's No. 1 Townsite, center of Block 38, Pettus Townsite; location.

Lasater Pool—Brooks County

Houston Oil Co.'s No. 1 Holbein-Wormser, Palo Blanco de Maguellas Survey; total depth 3,814 feet; dry gasser, 20,000,000 feet.

Pettus Field—Goliad County

Doctor Hewitt and others' No. 1 Ray, 200 feet each way out of southwest corner of B.&B. Survey; total depth 4,050 feet; set casing.

Cartwright Pool—Live Oak County

Houston Oil Co.'s No. 2 Cartwright, 500 feet east of No. 18, in the J. M. Colchado Survey; total depth 1,463 feet; drilling in sand and sandy shale. Same company's No. 1 R. Boothe, 3,000 feet from west line, 300 feet south line, in the M. B. Kilvin Survey; total depth 4,918 feet; drilling.

Agua Dulce Pool—Nueces County

Agua Dulce Oil & Gas Co.'s No. 1 J. A. Daudermann, 450 feet south and north line, 450 feet west and east line of Block 13, SE, Section 32, Benton Pasture Subdivision; total depth 2,410 feet; making new hole. Houston Oil Co. of Texas' No. 1 M. E. Brooks, 330 feet from north and east lines of fractional Section 29, Benton Pasture Subdivision, Los Sauces grant; total depth 4,180 feet; resumed drilling with heavy rig. Saxet Oil Co.'s No. 1 Donegan, 700 feet from north and east lines of east 240 acres of Donegan tract; total depth 3,306 feet; coring and testing. Same company's No. 6 John Dunn, 600 feet south of No. 5 Dunn; total depth 1,814 feet; drilling in sticky shale.

Cole Pool—Duval County

Cole Petroleum Co.'s No. 69 R. Benavides, 660 feet northeast line, 693 feet northwest line, Cole Subdivision, Mariano Arispe grant, Block 6, Survey 20; total depth 3,169 feet; drilling. Henne-Winch's No. 1 Rosa Benavides, 175 feet southwest line, 205 feet southeast line, Cole Subdivision, Mariano Arispe grant, Block 4, Survey 22; total depth 1,950 feet; drilling.

Kohler Pool—Duval County

Simms Oil Co.'s No. 9 Dinn, 660 feet east line, 660 feet south line of NW SE, Survey 143; rigged up, standing. Humble Oil & Refining Co.'s No. 41 Kohler, 2,970 feet south line, 330 feet east line, Survey 165; location.

Schoolfield-O'Byrne—Duval County

C. E. Long and others' No. 1 Bishop Duval Land Co., 2,800 feet north line, 160 feet west line, Survey 59; rigging up. Magnolia Petroleum Co.'s No. 1 Lundell, 450 feet north line, 150 feet east line, SE, Survey 60; total depth 4,300 feet; drilling in sticky shale.

Carolina-Texas Pool—Webb County

W. R. Shankle's No. 2 Webster, 1,170 feet west, 150 feet south line, Survey 684; rigging up.

Cole Pool—Webb County

French Oil Corp.'s No. 1-B R. Benavides, 150 feet south line, 150 feet east line, Survey 661; spudded in. O. W. Killam's No. 19 Bruni, Adams Subdivision, Mariano Arispe grant, Block 1, Survey 8; derrick. O. W. Killam's No. 5 Bruni, 270 feet northwest line, 203 feet southwest line, Adams Subdivision, Mariano Arispe grant, Block 26, Survey 8; total depth 2,593 feet; blew out, trying to kill. Magnolia Petroleum Co.'s No. 4 C. Benavides, 150 feet south line, 150 feet west line, Survey 662; total depth 2,335 feet; coring. S. R. C. Co.'s (Trinity Drillers, Inc.) No. 2 Trevino, 490 feet east line, 150 feet north line, Block 8, Survey 66; total depth 1,200 feet; location changed.

Charco Redondo—Zapata County

C. R. Moore and J. M. Moore's No. 1 Adela G. de Flores, 330 feet northwest line, 330 feet northeast line, E. M. Doty Oil & Gas Subdivision, Block 99, Charco Redondo grant; total depth 150 feet; spudded in; set 10-inch casing at 150 feet. C. R. Moore and J. M. Moore's No. 2 Adela G. de Flores, 150 feet northeast line, 150 feet southeast line, E. M. Doty Oil & Gas Subdivision, Block 151, Charco Redondo grant; total depth 50 feet, starting. Mid-West Public Utilities' No. 1 G. Pia, 450 feet southwest line, 450 feet southeast line of M. P. de Garza tract, Block 33, Pedernal grant; total depth 1,381 feet, standing.

Jennings Pool—Zapata County

Alamo Drilling & Leasing Co.'s (Claggett) No. 2 Trevino, 150 feet west line, 150 feet south line, Block 1, Survey 66; derrick (location changed). Alamo Drilling & Leasing Co.'s (Blair) No. 3 Trevino, 750 feet east line, 150 feet north line, Block 1, Survey 66; derrick. R. F. Blankenship's No. 2 Garza, 425 feet west line, 425 feet north line, Block 2, Survey 413; total depth 1,650 feet, preparing to drill deeper from 1,650 feet. A. L. Edgington's No. 4 I. G. Trevino, 150 feet south line, 150 feet west line, Block 26, Survey 412; spudded in. Grimm & Yakey's No. 1 C. Bustamente, 150 feet northeast line, 1,300 feet northwest line, Share 33, Fansler Partition, Comitas grant; rigging up. Nordan & Morris-Allen & Morris' No. 1 E. Gutierrez, 4,410 feet southeast line, 450 feet northeast line, Share 4, Fansler Partition, Comitas grant; total depth 600 feet, drilling. W. R. Shankle's No. 2 E. Gutierrez, 600 feet northeast line, 2,989 feet northwest line, Share 4, Fansler Partition, Comitas grant; spudded in.

Jennings-Cuellar—Zapata County

O. W. Killam's (Killam-Duggan) No. 17-B Cuellar, 150 feet south line, 150 feet southwest line, Survey 277; location. O. W. Killam's (Killam-Duggan) No. 18-C Cuellar, 2,804 feet southeast of northwest corner, 150 feet southwest line, Survey 278; total depth 2,301 feet; coring. O. W. Killam's No. 24 Cuellar, 2,926 feet northwest line, 150 feet northeast line, Cerrito Blanco grant; derrick. South Texas Production Co.'s No. 1 F. G. Martinez, 2,878 feet north line, 2,498 feet west line, Survey 6; rigging up. South Texas Production Co.'s No. 9 Measles and others, 3,830 feet southeast line, 660 feet northeast line, Cerrito Blanco grant; total depth 1,756 feet, drilling.

LA.-ARK. FIELDS

(Continued from Page 47)

ter mile east and the same distance south are two of the company's dry holes. Four new wells, all of them wildcats, were begun in DeSoto during the week. Gulf Refining Co. has derrick up for No. 1 Dry, in the NW SW, Section 14-11-15, southeast of Logansport in the far southwest corner of the parish where, unless the signs fail, there is apt to be quite a bit of activity during the last half of the year. Odell & Lawton, whose No. 1 Harris in Section 11-13-14, gauging around 40,000,000 feet of gas at 1,120 pounds from 3,150 feet also turned out to be considerably better than early estimates made it, have begun a second well in the same section, No. 1 Tidwell-Tull, in the SW NW, half a mile northwest of the Harris. Incidentally, the Harris was abandoned several years ago as a dry hole by the original owners only a few feet above the present total depth. Pelham & Bunby, Oklahoma operators, have taken 3,000 acres centering about 2½ miles south of Grand Cane and 8 miles northwest of Mansfield and have derrick up in the C S half SE, Section 32-13-14, for a 3,500-foot test on the Rhodes land. T. L. Philp and associates have derrick up for No. 1 Talbot in the NW NE, Section 9-13-13, 1½ miles southeast of what production there is in the Holly district.

Monroe-Richland

Eight completions, of which five were in Richland, added 187,187,000 feet of gas to the Monroe-Richland areas's total open flow during the week. One of the others was in Morehouse Parish, one in Ouachita and one in Union. The best of the eight was Northern Louisiana Natural Gas Co.'s No. 4-B McCoy, Section 17-16-6, Richland Parish, 39,695,000 feet at 540 pounds, total depth 2,450 feet; Pelican Natural Gas Co.'s No. 1 M. Chapman, Section 14-16-6, made 30,000,000 feet, total depth 2,451 feet; Richland Operating Co.'s No. 2 Godfrey, Section 25-16-6, down in the southeast corner of the field, made 32,115,000 feet at 665 pounds, total depth 2,450 feet. Louisiana Gas & Fuel Co.'s No. 1-D D. R. Sartor, Section 9-16-6, gauged 34,765,000 feet at 530 pounds from 2,450 feet and Union Carbon Co.'s No. 2 Mitchell, way up on the north edge of proven territory, in Section 20-17-6, gauged 16,380,000 feet, total depth 2,438 feet. Monroe gas rock was found in this well at 2,340-54 feet. Ouachita Natural Gas Co.'s No. 13 Smith, Section 37-20-4, Ouachita Parish, gauged 17,744,000 feet of gas at 655 pounds, total depth 2,147 feet; United Carbon Co.'s No. 2 Patton, Section 2-20-4, Morehouse Parish, made 11,500,000 feet, total depth 2,170 feet, and Nemours Corp.'s No. 1 Digby, Section 11-20-3, Union Parish, gauged 4,987,000 feet with 1,000 pounds rock at 2,189 feet.

Rumors of a gas blowout in a wildcat 8 miles south of Zwolle production turned out to be a report on a show of considerable gas with much salt water in lime and shale at 4,068 feet in Teteco Oil & Gas Co.'s No. 1 Louisiana Long Leaf Lumber Co., Section 18-6-11. Loring Oil Co.'s No. 9 Bowman-Hicks, Section 34-8-12, 7 bbls. at 2,518 feet, and Stovall Drilling Co.'s No. 1 Lefkowitz, Section 33-8-12, dry and abandoned at 3,020 feet were Sabine Parish completions. Loring Oil Co. did not set 10-inch at 3,618 feet as planned but drilled on to 3,737 feet and is taking 2-foot cores as they go with No. 1 Peavy-Wilson, Section 21-6-13, south of Blue Lake production. No. 4 Bowman-Hicks in Section 34-8-12, is temporarily abandoned at 2,669 feet and No. 5 in the same section is arranging to go deeper after testing dry at 3,925 feet. This was another

disappointment as a core of porous lime from 3,915-25 feet showed considerable oil and there was also some gas. With 6¼-inch cemented at 3,900 feet the hole is scheduled to go 6,000 feet. McDaniel & Lieber's No. 1 Batson in Section 16-8-12, a wildcat 1½ miles northwest of nearest Zwolle production, had a show of oil at 2,526 feet but bailed dry and is waiting orders. Bridges-Clark Oil Co.'s No. 2 Guy, Section 33-10-12, a semi-wildcat southeast of Pleasant Hill production, which started up again last week after being temporarily abandoned at 2,447 feet in May, cored sand showing oil and gas and is coring again at 3,194 feet. Farther east, J. M. Bridges has rig up to drill No. 1 Cook Land Co.

Blue Lake District

In Section 34-10-12, McCullough Exploration Co., of Houston, has geophysical crews at work in the Blue Lake district of Sabine. Magnolia Petroleum Co. has a large amount of acreage south of production in this area and is reported getting ready to drill the first test. There is also much geophysical work going on and contemplated involving the Catahoula contact, location of this work to take in all of central Louisiana from the Texas line to the Mississippi River. Half a dozen or more major companies are named in connection with the undertaking and one of them, Humble Oil & Refining Co. has approximately 200,000 acres centering on Oberlin, Rapides Parish. Practically all land in this part of the State is held in large blocks by lumber companies and it is likely that leases on small blocks will be few and far between.

Urbana Failure

Urbana district of Union County, Arkansas, was productive of another failure when Southern Crude Oil Purchasing Co. abandoned No. 1 Oliver after a dry test at 3,629 feet. Location is in Section 11-18-13, east of the district's producing wells. J. D. Reynolds' No. 4 Berg, Section 27-15-15, Ouachita County, Smackover pumped 27 bbls., total depth 2,058 feet. Sundby and others' No. 2 Perdue, Section 33-16-14, Champagnolle, cored salt water sand at 3,205 feet. South El Dorado Oil Co.'s wildcat in Section 9-19-15, has 400 feet of fluid in the hole and is waiting on pumping equipment, total depth 2,186 feet. McDonald & Shaw have abandoned their Little River County wildcat, No. 1 Black, in Section 12-13-28, several miles southeast of Asgdown, which has been shut down for some time at 2,180 feet.

Two of three wildcats to be drilled on two blocks across the Mississippi River from his Concordia block have begun by A. C. Glassell. He has cemented 12½-inch at 246 feet on No. 1 Stowers in the SE NE, Section 1-2n-5w, Adams County, Mississippi, and rig is up for No. 1 Arontoch in the NE NE, Section 29-8-2w, Wilkerson County. The former is on a block of 38,000 acres and the latter on a block of 24,000 acres across the river from Joe Marr's block in Concordia Parish. The Stowers well is to go 3,000 feet and the other 4,000 feet.

CANADIAN FIELDS

(Continued from Page 52)

Oil & Refining Co.'s No. 2 Farbo, Section 2-27-4w, reported good for 100 bbls. at 2,468 feet, has increased its flush production to 520 bbls. and looks like the largest well in the field. Rice & Radigan's No. 1, SW, Section 1-37-4w, shows less gas but more oil and is reported making 150 bbls. or better. Hannah Porter Oil Co.'s No. 1, SE, Section 2-37-4w, is reported making around 300 bbls., and Cosmos Petroleum Co.'s No. 1 Thacker, Section 2-37-4w, is reported doing 300 bbls. Cosmos' No. 2 Thacker, same section, is drilling around 2,000 feet. Askalta Oils' No. 1 in the south end of the field is reported spudding.

A Lethbridge syndicate headed by K. D. Johnson, William Oliver and E. E. MacKay will drill a test on acreage of Multi-Structure Holdings, Ltd., in LSD 8, Section 19-1-16w4, a mile west of Capitol's No. 1. Acreage has also been secured in LSD 1, Section 10-1-17w4, a mile northwest of Ko-Top's No. 1.

Lancashire Oils, Ltd., of Calgary, has located its No. 1 test in Section 9-37-3w, east of Dakota-Montana's No. 1, to spud in by July 15.

It is reported that the Texas Oil Co., which entered Canada some years ago as a marketing organization, will drill a series of tests on acreage of Lethbridge Petroleum & Refining Co., Ltd., 7 miles west of Lethbridge. Some 14,000 acres are involved, on a structure south of Kipp and Monarch and north of the Belly River. The structure was located as an indirect result of core drilling operations by Senator Michener and associates of Commonwealth Petroleum, Ltd., on the adjacent Blood Indian Reserve. Acreage was leased by the Lethbridge company, which carried on extensive structure tests, and subsequently subleased a portion of its holdings to Benton Oils, Ltd. Arrangements are reported to have been made by the Benton company with Imperial Oil, Ltd., for the testing of its acreage; while the remaining acreage of Lethbridge Petroleum & Refining Co. will be tested by The Texas Company. It is reported that the agreement with The Texas Company calls for drilling of three tests, and that both companies are planning deep drilling operations, and that the structure gives a possibility of five sands before reaching the Madison lime at approximately 4,500 feet. Hudson's Bay Oil & Gas Co. has some acreage in the same area and it is unofficially reported that the Prairie Oil & Gas Co. is also interested.

On the adjacent Blood Indian Reserve, Commonwealth, Ltd., is drilling the last of a series of structure tests, following which a commercial test will be located by Eugene Coste for the company, which holds 18,000 acres on structure.

Turner Valley

In the Central Turner Valley Calmont Oils' No. 1, LSD 2, Section 1-20-3w5, is 210 feet in the lime at 5,664 feet depth and reported testing production, with a considerable wet gas flow.

In North Turner Valley, Model Oils' No. 1, LSD 8, Section 22-20-3w5, is reported slowly increasing its production, originally estimated around 100 bbls. a day. At the same time the production has declined from 72 to 62 gravity in the course of the past two months. Foothills' No. 1 producer, also in the north end of the field, has a similar experience. It is understood that on the transfer of natural resources from the Federal Government to the Alberta provincial government the latter will enact legislation for the registration of royalty claims against production.

In South Turner Valley, Freehold Oil Corp.'s No. 2, LSD 8, Section 20-19-2w5, is at 4,422 feet and taking production around 125 to 150 bbls. a day from the lime, but may deepen. In the same section, Calmont Oils' No. 2, LSD 11, is officially reported maintaining its original wet gas flow of over 42,000,000 feet. Crude naphtha recovery is estimated at 800 bbls., though adjustments are still being made in back pressure.

In Section 4-19-2w5, Mercury Oils' No. 3, LSD 2, is reported making 190 bbls. a day. Mercury's No. 2, LSD 12, which was making about 110 bbls. following a shot, has bridged and is cleaning out.

In Section 16-19-2w5, Homestead Oils' No. 1, LSD 5, is taking production between 50 and 60 bbls. a day with tools in the hole at 4,795 feet pending a decision as to further work.

In South Turner Valley, Baltac Oils' No. 1, Section 20-19-2w5, is reported testing after a second shot in the lime. Home Oil Co.'s No. 5, LSD 7, is drilling below 4,633 feet and close to production.

Drilling in Foothills

On the Waite Valley structure west of Turner Valley, Richfield Petroleums' No. 1, LSD 4, Section 25-20-4w5, is the deepest test, drilling at 4,770 feet. At this depth it has not yet reached the lime formation but is apparently in the lower Kootenays.

On the Pincher Creek structure, Weymarn Petroleums' No. 2, LSD 5, Section 7-6-1w5, is reported standing 12 feet in the Dalhousie sands around 1,876 feet depth, with a wet gas flow estimated 1,000,000 to 1,500,000 feet. Reports that a production of 100 bbls. of high grade crude had been struck are officially denied. The test will be drilled into the Dalhousie sand, and if commercial production is not secured there, will be continued into the Madison lime. The show at this depth is one of the most encouraging yet encountered in the foothills outside the Turner Valley Field.

New Foothills Operations

Cotton Belt Mines, Ltd., of Vancouver, British Columbia, is reported planning to start drilling this summer on acreage recently acquired in the Alberta foothills. B. F. Lundy, president of the company, recently visited Alberta to look over oil prospects.

Source Rock Petroleum, Ltd., of Calgary is reported arranging for drilling equipment for a test on the Watson structure, north of the Pincher Creek area. Raven Oils, Ltd., has a location in Section 20-9-2w5, near Maycroft, with some material on the ground. There has been extensive filing at various times on this structure by E. W. Watson and associates, Source Petroleum, Ltd., and the McCroskey syndicate, and the gas showings recently encountered on the Pincher Creek structure a little further south render the Watson structure an interesting prospect.

Atlantic Keystone Petroleum Co., which has a test in LSD 1, Section 19-27-6w5, on the Ghost River structure standing at 2,961 feet, has taken over the Canadian holdings of Cameron Petroleums, Ltd. These include some 15,000 acres scattered over the Milk River, Black Diamond, Highwood, Moose Mountain, Duvernay and Spring Coulee areas. Cameron's No. 1 was located last year in the New Valley area, west of Turner Valley, in LSD 8, Section 36-20-3w5, and rigged up. Drilling outfit, derrick and camp are included in the deal. It is possible the Cameron outfit will be transferred to another location.

Border Fields

In the Keho Lake district, Hudson's Bay Oil & Gas Co.'s Keho No. 1, LSD 2, Section 17-11-22w4, has spudded in. Test started with 24-inch hole and surface casing was cemented at 150 feet. It is one of the most important wildcats recently undertaken in the Southern Alberta area. The location is about 18 miles from Lethbridge, in previously untested territory, and was made following extensive geological work, and thorough core drilling. In the Lomond district, Hudson's Bay's Lomond No. 2, LSD 1, Section 26-17-18w4, is at 2,455 feet and drilling.

In the Skiff Field, Devenish Petroleums' No. 4, LSD 13, Section 29-5-14w4, is drilling below 1,950 feet after getting a fair gas show at 1,920 feet.

On the Montana side, Black Gold Petroleum Co.'s No. 1, Section 30-36-2e, is reported to have got a small crude oil production, around 50 bbls. in the Sunburst and is deepening to the Ellis. If the latter horizon does not give satisfactory production, the test may be carried to the lime before plugging back and shooting the Sunburst.

The Ribstone Field in eastern Alberta now has three producing wells. Meridian Oils' No. 1, the discovery well, was drilled last year, and Meridian's No. 2, LSD 1, Section 16-45-1w4, and Imperial Oil's Ribstone No. 2, LSD 14, Section 9-45-1w4, were completed last month.

In the Wainwright Field, Bethwain Oils' No. 2, LSD 9, Section 4-45-6w4, got good oil shows in recent cores around 2,286 feet, and is waiting for standard tools to drill into production. Senator Oil & Gas Development Co.'s No. 1, E half, Section 23-44-6w4, is reported spudding in, and is planning to carry 10-inch casing to the lime in case a deep test is necessary. Wainwright Petroleums' No. 1, LSD 6, Section 30-45-6w4, made a good showing on a bailing test and is now waiting for pumping equipment. Fabyan Petroleums' No. 1, LSD 8, Section 24-45-8w4, has passed through 30 feet of lime and taken underlying cores that indicate a well saturated oil sand. Lloyd's Petroleum's No. 1, LSD 12, Section 6-45-6w4, is reported rigged up ready to spud in.

British Columbia

The Geological Survey of Canada is carrying on considerable work in British Columbia this season. Dr. B. R. McKay and four assistants are working in the vicinity of Corbin and will later investigate the area near Coleman. A further survey party in charge of Dr. C. E. Cairnes is investigating oil, coal and gas possibilities in the vicinity of Vernon.

Saskatchewan Drilling

In Saskatchewan a local syndicate drilling in LSD 14, Section 35-28-8w3, at Eden Valley, near Outlook is reported to have encountered a strong show of gas below 964 feet. The location is in southwestern Saskatchewan, not far north of the international boundary.

South and west of Regina, the Swedish-American Prospecting Corp. of New York has seven engineers at work in the Claybank district making a geophysical survey for oil and gas structures. This is the first attempt to apply this method in Saskatchewan.

British Columbia Test

In British Columbia, Sumas Oil Co.'s No. 2 is preparing to rig up a new rotary outfit, which will deepen the test from the present depth of 500 feet. No 1 test in the same vicinity showed shale to around 700 feet and was carried to below 1,000 feet. It is planned to drill No. 2 to 2,000 feet where an oil horizon is looked for.

Ontario Operations

In Norfolk County, Ontario, a test drilled jointly by Acme Gas & Oil Co. and Vacuum Gas & Oil Co. at Mabee's Corners near Tillsonburg is reported to have encountered gas at 1,320 feet with a measured capacity of 400,000 feet a day.

KANSAS FIELDS

(Continued from Page 44)

J. H. Elem and others' No. 1 Fowler, SE cor. SW SE, Section 35-23-4, has been abandoned at 2,825 feet. Ramsey and others' No. 2 Lehman, NW cor. SW SW, Section 35-28-6, is a dry hole at 2,897 feet.

Chautauqua County

Griffith & Bell's No. 2 Curran, CWL NW NE, Section 12-32-10, has been completed for 40 bbls. in sand 1,645-72 feet. Velentine and others' No. 1 Patterson, NW cor. SE SW, Section 2-33-9, is a dry hole at 1,742 feet.

Coffey County

Hoyt and others moved a machine in for No. 2 Scott, NW cor. SE, Section 13-23-14. Staats and others' No. 1 Mosser, SW cor. NE, Section 11-22-13, has been abandoned at 1,819 feet.

Chase County

Polhamus and others' No. 4 Leedy, C NW, Section 36-22-9, is rigging up.

Ellis County

Phillips Petroleum Co.'s No. 1 Ruth, SE cor. NW, Section 32-11-17w, has been abandoned at 3,793 feet. No. 1 Horn, NE cor. SW, Section 5-12-17w, has been completed for 590 bbls. in sand 3,633-46 feet.

Cowley County

The Prairie Oil & Gas Co.'s No. 1 Ewers, NW cor. NE SW, Section 31-31-6, has been completed for 20 bbls. at 2,970 feet after plugging back from 3,087 feet.

Elk County

The Prairie Oil & Gas Co.'s No. 1 Williams, SW cor. NW, Section 36-30-9, has been deepened to 2,687 feet and abandoned.

Greenwood County

O'Neil and others' rig is up for No. 2 Harlan, SE cor. NW NW, Section 34-22-11. Location has been made for No. 3 Hess, NE cor. NW, Section 34-22-11. Aladdin Petroleum Corp. staked location for No. 4 Jones, SE cor. NW, Section 36-24-10. McGinnis and others made location for No. 6 Mack "B," SW cor. NE, Section 36-24-10. The Texas Company's No. 2 Blanck, SE cor. NW SE, Section 29-22-13, has been completed for 25 bbls. in sand 1,713-40 feet. O'Neil and others' No. 2 Hess, SW cor. NE NW, Section 34-22-11, made 125 bbls. in sand 1,874-1,924 feet. Independent Oil

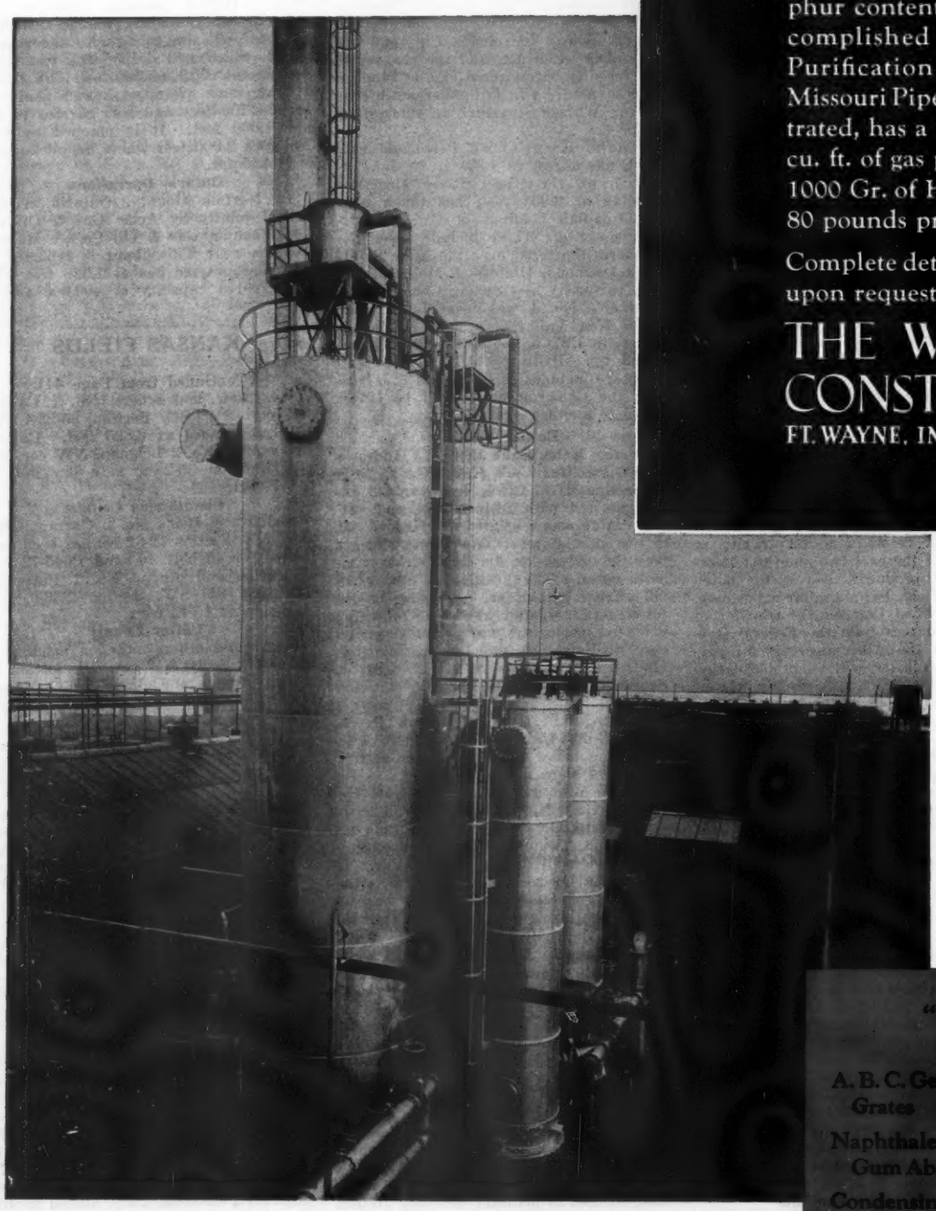
For PURIFYING oil refinery gases

The purifying of oil refinery still gases, under high pressure and with high Sulphur content, has been successfully accomplished with the Koppers Liquid Purification Processes. The Illinois-Missouri Pipe Line Company plant, illustrated, has a daily capacity of 6,000,000 cu. ft. of gas per day, the gas containing 1000 Gr. of H_2S per 100 cu. ft., at 50 to 80 pounds pressure.

Complete detailed information available upon request.

THE WESTERN GAS CONSTRUCTION CO.

FT. WAYNE, IND. *Subsidiary of* THE KOPPERS CO.



Purification Plant of the Illinois-Missouri Pipe Line Company at Wood River, Ill. 6,000,000 cubic feet of Refinery Still Gas purified daily.

"WESTERN GAS" *Designs and Builds*

A. B. C. Generator Grates	Holders (Gas, Oxygen, etc.)
Naphthalene and Gum Absorbers	Liquid Purification Plants
Condensing Apparatus	Oxide Boxes (Purifiers)
Carburetted Water Gas Plants	Welded Steel Pipe
Blue Water Gas Plants	Tower and Rotary Scrubbers
Gas Dehydration Plants	Valves

& Gas Co.'s No. 1 Thrall, NW cor. SW SW, Section 27-23-10, is dry and abandoned at 2,362 feet. Titus and others' No. 1 Scott, C S half N half NW, Section 17-24-12, is a dry hole at 1,780 feet. Eureka Oil Co.'s No. 1 Carter, NE cor. NW NE, Section 16-25-11, has been abandoned at 1,800 feet.

McPherson County

Graham Brothers' rig is up for No. 1-A Rolander, SW cor. SE SW SW, Section 30-18-2w. Sinclair Oil & Gas Co.'s No. 4 McCurdy, NE cor. SE SE, Section 33-20-3w, is rigging up. McPherson Oil & Gas Development Co. and Shell Petroleum Corp.'s No. 1 Robinson, C SE, Section 10-19-2w, is making 190 bbls. from chat 2,918-57 feet. W. C. McBride, Inc.'s No. 1 Whitwright, NE cor. SW, Section 30-19-1w, has been completed for 50 bbls. in chat 2,947-3,011 feet. Sinclair Oil & Gas Co.'s No. 6 Morehouse, NE cor., Section 4-21-3w, made 900 bbls. in Wilcox sand 3,340-64 feet.

Marion County

National Refining Co. has the rig up for No. 17 Reamey, CSL SE, Section 17-21-4.

Morris County

General Utilities Co.'s No. 1 Swan, NW cor. SW SW, Section 14-17-7, is spudding.

Morton County

Argus Production Co. made location for No. 2 Morgan, C NE, Section 6-33-39w. The rig is on the ground for No. 1 Morgan, C NW, Section 8-33-39w.

Rice County

Gypsy Oil Co. moved the rig in for No. 1 Koch, CWL E half NW, Section 35-20-9w. Boucher and others moved a machine in for No. 1 Miller, SE cor. SW NE, Section 7-21-10w.

Rush County

Flynn and others' No. 1 Tammen, C SW, Section 11-18-16w, is a rig on the ground.

Russell County

E. W. Marland, Inc.'s No. 1 Maier, NE cor. NW, Section 8-15-14w, has been completed for 60 bbls. in sand 3,267-72 feet.

Sedgwick County

Derby Oil Co. is erecting the rig for No. 1 Cloud, SE cor. SW, Section 19-27-2. Blankenship Petroleum Co. is building the rig for No. 1 Shaffer, NE cor. NW, Section 30-27-2.

Stevens County

Missouri Kansas Gas Co. and others made location for No. 2 Kelly, C NE, Section 15-34-38w. Argus Production Co. made location for No. 1 West, C NE, Section 31-34-38w.

Sumner County

Blackwell Oil & Gas Co. and others' No. 1 Clift, SE cor. NW, Section 26-33-3w, is dry and abandoned at 4,552 feet.

Woodson County

Spencer & Derby Oil Co.'s No. 1 Guy "B," SW cor. NE NW, Section 29-23-15, is drilling at 1,300 feet.

NEW TUBE STILL UNIQUE IN DESIGN

(Continued from Page 38)

taken overhead and a heavy gasoline as the knock-back. This third tower is 3'6"x15' and also contains three baffle sections. The overhead or light gasoline is expected to be under 375 endpoint and the knock-back or heavy stream will pass U. S. Motor specifications.

The last tower also happens to be made from the shell of an old still and in this manner the fractionating equipment for the revised unit was fabricated with but a small expenditure for new equipment.

The processing of the bottoms from the evaporator which will include all of the lub stock and fuel remains a little indefinite. It is hoped that because of the high temperature at which the crude is flashed in the evaporator that a pressable wax distillate may be recovered as an overhead direct from the shell stills. These stills operate in pairs, the one receiving a charge from the evaporator while the other one is reducing a charge.

These stills are not equipped with towers and will be operated so as to recover a gas oil preliminary to taking off the wax distillate. The bottoms will be reduced to a 14-gravity fuel. The cycle of operation of these two pairs of shell stills will be regulated so that by the time one pair is charged the other pair will have completed the reducing of the bottoms and is ready to be recharged.

Probable Yields

Another factor which appears favorable to this method of operation is the probable increase in the gasoline yield due to some cracking taking place in the pipe still and evaporator, while the oil is held at 800° F. temperature. The yield due to cracking will, of course, be small, but may add 1 to 4 per cent to the total gasoline yield.

While running 38-39 gravity Kentucky crude, the company expects to recover the following yields from the new installation:

40 per cent total gasoline, U. S. Motor.
7 per cent kerosene, 150 flash.
20 per cent wax distillate.
18 per cent gas oil.
12 per cent fuel oil, 14 gravity.
3 per cent loss.

In the design of the bubble cap towers, the company chose to use specially cast bubble trays. These were made locally and a part of one of the middle sections is shown here in the accompanying picture. On the opposite side of the tray, the risers appear in the usual manner and over these will be placed American Radiator bubble caps. In the other towers in which trays or spreaders were used, the plates were also specially cast. These plates are similar in design to the bubble cap plates, the risers extending up about 1½ inches. There are 43 such risers in each plate in the kerosene tower and 25 in each plate in the gasoline tower.

MICHIGAN FIELDS

(Continued from Page 56)

Pleasant area, including the proven field and three producing wildcats, is now making about 8,245 bbls. a day, while the Muskegon Field is good for another 3,300 bbls. a day, giving the State a daily average of more than 11,500 bbls. This is about 1,000 bbls. a day more than last month's average.

Muskegon Field

A well located on a 20-acre lease on the Muskegon River flats, surrounded by other wells but undeveloped for two years because of litigation, came in this week good for about 50 bbls. in the upper Traverse. It is the Cimusk Oil Co.'s No. 1 Paulseon-Barlow-Heinz, SE NE Section 8-10n-16w, Muskegon Township, Muskegon County, which is now being drilled deeper to the lower Traverse, where it is hoped to get enough additional gas flow to produce the well without pumping.

The Lima Oil Corp.'s No. 8 Louis P. Haight, SW SW Section 9-10n-16w, making about 150,000 feet a day of gas and some oil, may be deepened to the Dundee formation.

Of the six new permits issued during the week three are new edge wells in the Mount Pleasant Field: E. Brown Development Co.'s No. 3 E. Grubb, SE NW SW, Section 2-14n-3w, Chippewa Township, Isabella County: G. Lee-P Development Co.'s No. 4 E. Grubb, NE SW SW, Section 2-14n-3w, also Chippewa Township; and the Dixie Oil Co.'s No. 8 N. Davis, NW SE SW, Section 2-14n-3w.

The Lima Oil Corp.'s No. 10 Louis P. Haight, NE SW SW, Section 9-10n-16w, Muskegon Township, Muskegon County, is the only new permit for the proven Muskegon Field or for the western part of the State.

Isbell & Sarver's No. 1 B. Keehbauch, NE NE NE, Section 30-15n-3w, Denver Township, Isabella County, is a new Leaton wildcat location on which operation will be started at once.

The Eureka Oil Corp.'s No. 1 W. J. Lambert, SW SW, Section 9-16n-4e, Fraser Township, Bay County, is the sixth permit.

Drilling will soon be started on a new wildcat southeast of the village of Remus and southeast of the Broomfield Township gasser which will reveal structures in a territory not yet explored. It is nearer the Mount Pleasant Field than to any other production in the State. The well will be Lewis D. Mehrten's No. 1 Michael Baumann, NE SE SW, Section 21-14n-7w, Wheatland Township, Montcalm County, and it may indicate how far the gas field tapped by the Isabella Oil Development Co.'s No. 1 M. D. Keeler, NW NW, Section 10-16n-6w, Broomfield Township, Isabella County, may extend.

State Leases

Seven operating oil companies and individuals bid $2,905 for leases on a total of 5,441 acres in six counties offered at the last auction of state lands at Lansing. A total acerage of 6,548 in Midland, Clare, Isabella and Kalkaska, Sanilac and Ogemaw Counties was offered.

Payment for the leases on which bids were entered and accepted will average 53.4 cents, or 32 cents higher than on any previous state lease auction sales, according to S. G. Fontanna, head of the lands division of the Michigan State Conservation Department.

Purchasers and the acreage on which they entered bids were: Walter J. Diebel, Mount Pleasant, 620 acres in Isabella County, for $400; Dixie Oil Co., Inc., Tulsa, 567 acres, Clare and Isabella Counties, $760; Pure Oil Co., Chicago, 560 acres, Isabella County, $1,000; Charles Strange, Clare, 2,583 acres, Isabella and Midland Counties, $580; E. E. Johnstone, Saginaw, 40 acres, Isabella County, $100; K-Barr Oil & Gas Co., Detroit, 237 acres, Sanilac County, $10; and J. C. Graves, Saginaw, 840 acres, Ogemaw County, $55.

Corunna Well

O. L. Barneby's No. 1 John Galloway, brought in several weeks ago near Owosso and Corunna, Mich., in the central eastern part of Michigan, is now producing about 10 bbls. of oil daily, according to C. M. Ross, in charge of the well. It is located NW NE, Section 11-6n-3e, Shiawassee Township, Shiawassee County, and the oil is reported to be about 48 gravity, or considerably higher than any other oil being produced. Salt water, which for a time threatened to make abandonment of the well necessary, has been largely eliminated. The oil is now being sold to the Memorial Hospital, of Owosso, for use in oil burning furnaces. Traverse limestone was topped in this well at 1,760 feet and the well was drilled to about 12 feet in the pay sands at 1,800 feet total depth.

Berrien County

Two Berrien County wildcats have been abandoned. W. E. Eldridge's No. 1 Wetteran, near New Buffalo, was plugged at 1,775 feet deep after being dry to the Trenton limestone. Gibson-Johnson & Borden, Inc., and the Dixie Oil Co. have abandoned their No. 1 Community well, NW SE NW, Section 15-4s-19w, Benton Township, Berrien County, at 882 feet. The Eldridge-Wetteran well is located NW SE, Section 10-8s-21w. It was nearer to the exact southwest corner of the lower peninsula than any other wildcat ever drilled in that part of the State.

DEEPER OIL DISCOVERED IN THE BIBI EBAT FIELD

Following an oil gusher in the Maikop fields at a new low level comes a report through Walter Duranty, Moscow correspondent of the New York Times, of a richer pool in the Bibi Ebat sector of the Baku fields.

Bibi Ebat wells have averaged 1,000 to 1,400 feet and had been considered almost worked out with an output of almost 10,000,000 bbls. annually. A year ago, however, a "shock brigade" of local workers volunteered to try to reach a deeper pool, and one has been struck at a depth of 3,500 feet.

Although unusually heavy capping machinery had been installed, the well blew the machinery to pieces after 75 atmospheres of pressure had been registered. The oil flowed in open reservoirs, and others were hastily dug. The surrounding region was cleared of inhabitants owing to the danger of fire.

The latest reports place the daily flow at more than 50,000 bbls. A wooden bridge has been constructed to carry a huge iron cap, which it is hoped will check the flow sufficiently for the installation of capping machinery.

In an interview in the Soviet government organ, Izvestia, M. Lomof, president of the Soviet Oil Trust, says production for the current fiscal year will total 125,000,000 bbls., or double the total during the last prewar year, and that in 1930-31 the total will reach 160,000,000, compared with the five-year plan's requirement of 155,000,000 by October, 1933.

The oil "pyatiletka" five-year plan thus would be accomplished in three years, although M. Lomof admits the reduction of first costs and the depth of new borings still fall short of the program.

An interesting development in the oil industry is a proposal that a new pipe line scheduled to be laid westward from the Emba Field on the east side of the Caspian Sea—potentially one of the richest fields in the Soviet Union—to Samara, Haratov or Stalingrad on the Volga be directed eastward instead to Akhtubinsk to serve the rapidly growing needs of Central Asia and Kazakstan.

EXPORT RUMANIAN SURPLUS

NEW YORK, July 7.—The Rumanian ministry of industry and commerce has made effective Article 198 of the mining law, providing that whenever crude oil production exceeds the working capacity of Rumanian refineries, the ministry may grant the free export of the ascertained surplus by producers having no refining facilities and forming an association to handle exportation.

In as much as present crude production exceeds the working capacity of Rumanian refineries, the ministry of finance has authorized the "association of production without refineries" to export 500,000 tons of crude petroleum.

UNIVERSITY OIL REVENUE

AUSTIN, Tex., July 5.—Revenue for the University of Texas permanent fund from royalties on oil production on university land in West Texas passed the $12,500,000 mark Wednesday with the receipt of remittances, bringing June royalties to a new high total for the year of $181,083. The total in the permanent fund from this source now is $12,650,672 and it is augmented by funds from other sources that bring the total to more than $14,500,000.

June royalties set a new high mark for both this year and last.

DOMESTIC EXPORTS OF PETROLEUM AND REFINED PRODUCTS

	Month of May		5 mos. ending May	
	1929	1930	1929	1930
Petroleum—Crude ..... Bbls.	1,932,316	2,202,513	8,905,894	9,584,782
Petroleum—Crude ..... $	2,603,468	3,128,294	11,662,233	12,729,777
Total refined petroleum ..... Bbls.	10,364,771	8,737,241	49,542,058	52,272,247
Total refined petroleum ..... $	40,494,981	34,515,992	197,397,500	196,235,519
Gasoline, naphtha and other light products ..... Bbls.	5,174,633	4,920,088	22,605,019	26,580,711
Gasoline, naphtha and other light products ..... $	22,512,592	20,206,896	103,001,234	111,835,449
Oils, illuminating ..... Bbls.	1,453,532	815,799	8,463,426	7,309,951
Oils, illuminating ..... $	6,691,479	3,542,244	35,897,552	28,600,706
Gas and fuel ..... Bbls.	2,898,533	2,138,341	13,893,630	14,133,942
Gas and fuel ..... $	2,934,868	2,193,932	14,822,158	14,231,631
Lubricating ..... Bbls.	816,196	849,998	4,499,518	4,277,346
Lubricating ..... $	8,118,648	8,411,757	42,574,974	40,570,350
Other refined petroleum ..... Bbls.	19,877	13,015	80,465	70,297
Other refined petroleum ..... $	237,394	161,163	1,101,582	996,883
Paraffin wax ..... Lbs.	18,660,431	21,400,432	117,532,647	112,628,942
Paraffin wax ..... $	823,908	801,394	5,897,890	4,434,105

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

METHANE CONVERSION PRODUCTS FROM NATURAL GAS

I would like to know something about the Fischer process for making products from natural gas.—T. L.

For some years Dr. Franz Fischer has been directing research work in connection with a study of coal and the utilization of the gas formed in the coking process. This work is being done at Mulheim, Germany, in the Institute fur Kohlenforschung. Any successful method for the manufacture of methane conversion products from this kind of gas would be applicable to natural gas.

Many years ago Berthelot succeeded in establishing certain principles for carbonization and made numerous substances. Fischer has developed similar principles and has made such a complex as naphthalene from the simple substance methane. Using a gas containing 93 per cent methane and passing it through an unglazed porcelain tube heated to about 900° C., a yield of tar and oil up to 12-13 per cent by weight of the gas was obtained, by regulation of the velocity of the gas stream. At a temperature of about 1,100° C. and a high-gas stream velocity, tar and light oil was obtained, of which the fraction distilling between 200-250° C. was largely naphthalene and the fraction 250-300° C. anthracene and phenanthrene, the residual being of a pitch-like character. The light oils adsorbed by active carbon had a specific gravity of 0.872 and for the most part distilled between 55-85° C. These were found to consist mainly of benzol with a little toluol and xylol.

Another process discovered at the institute is operated in two stages; in the first stage, the methane is subjected to the action of a glowing electrical discharge at a reduced pressure to form acetylene, which can be polymerized to form liquid hydrocarbons in different ways. The reaction tube contains iron or steel electrodes which are set about 40 cm. apart. A high tension alternating current is employed. The gases are passed through the tube in regulated quantity and the reaction products collected and condensed in artificially cooled receivers. Coke-oven gas is used and its volume increases by about 22 per cent, which may be inferred from the reaction $CH_4 = C_2H_2 + 3H_2$. The residue gas contains from 9-10 per cent acetylene, while the methane content is reduced to small proportions and the hydrogen content increased to about 70 per cent. In other experiments with practically pure methane, 445 liters of acetylene were obtained per cubic meter and 1,335 liters of hydrogen, by an energy expenditure of 13 kilowatt hours, or 29 kilowatt hours for a cubic meter of acetylene. Working along lines suggested earlier by Zelinsky, the acetylene was passed over active carbon or silica gel, heated to 650° C. in a porcelain tube. In this case, some deposited carbon in the tube is required as a catalyst, because in a clean tube the products are methane and hydrogen chiefly, but after carbon has deposited in the tube about 70 per cent of the acetylene passed through the tube is polymerized to oils. On an average, however, the oil yield is 25-30 per cent light oils, and 10-25 per cent heavy oils. An interesting fact is that a 10 per cent addition of carbon dioxide to the acetylene acts to increase the oil output, although apparently the carbon dioxide plays no direct part in the reaction.

SYNTHETIC MOTOR FUELS

What processes are in use for making gasoline, or a similar product, from coal and other materials? Have these methods been known for many years or are most of them recent discoveries?—C. R. C.

This subject has been mentioned on this page several times. Numerous references could be mentioned but a review by David Brownlie, reported in Petroleum Times, April 14, 1928, page 681, may serve to bring out the essential points. The following is abstracted from this source.

There are four general methods that may be used for the production of liquid fuel from bituminous coal and similar material:

1. High temperature carbonization.
2. Low temperature carbonization.
3. Hydrogenation.
4. Synthetic fuel, essentially the reduction of carbon monoxide.

High temperature carbonization of coal, as practiced for the production of coke, at temperatures, say from 2,000° to 2,200° F., cannot serve as a source of good motor fuel because of the extensive cracking with formation of gums, tars, and related substances.

As regards "low temperature carbonization," this term would be used in the broad sense of the heat treatment of coal, brown coal, shale, cannel, torbanite or other material generally at 900° to 1,200° F., but within the range of 800° to 1,800° F., in a manner different from the high temperature carbonization processes of the gas works and the coke oven, with, in most cases, the production of the maximum amount of good quality liquid fuel.

Ever since about 1825 many workers had investigated in the most detailed fashion the carbonization of raw materials of the above character for maximum oil production, as well as in many cases improved solid fuel. The value of a low and carefully controlled temperature with progressive heating and absence of cracking and decomposition of the oil, both as regards quality and quantity, was understood thoroughly and practiced on a large scale over 75 years ago.

The progress made in recent years with the various methods for making synthetic motor fuels has been the result of perfecting mechanical details. The hydrogenation process has received great attention and because of the high yields obtained gives promise of much success. The conversion processes are being investigated on a large scale in France.

VAPOR PHASE CRACKING AND KNOCK VALUE

Can you furnish a brief article explaining the recent popularity of vapor phase cracking stills as compared to the numerous units of this type which were discarded about ten years ago?—E. S. T.

The cracking art has been a continuous change since the first Burton stills were put in operation about 1912. New methods have been introduced for the purpose of increasing yields and more economical operation. Some of the early vapor phase stills were expensive to operate because of carbon deposits and the heavy gas losses but this loss has been overcome in many instances by suitable gas recovery systems. Carbon has come under control also.

Within a very few years the refining industry has learned that cracking in the vapor phase produced a gasoline with a higher antiknock value than when the same oil was cracked in the liquid phase. There was little known about the importance of the antiknock gasoline 10 to 15 years ago. Without question, the desire to manufacture a gasoline with as high an antiknock value as possible has been largely responsible for the building of vapor phase units during the past few years.

Of course much has been learned about tubes, return bends, furnaces, hot oil pumps, towers, automatic control, and numerous other factors which contribute to the successful operation of all cracking stills. Advantage has been taken of these facts in the construction and operation of the vapor phase units.

Probably one exceedingly important matter, that of velocity, was not so well understood 10 to 15 years ago. It is certain that nothing like the present day rate of circulation through the tubes was attained under cracking conditions.

At this time there are several vapor phase cracking processes in use. Some of the larger companies have had their units in operation for several years and claim large yields with nothing more than reasonable losses. A few of these appear to base operating success on the use of some form of catalyst.

METHODS FOR DETERMINING GASOLINE IN GAS

What method, or methods, would you recommend for making the analysis of gas to show the gasoline content?—W. C.

When investigating a new natural gas supply or refinery gas it is the best practice to use analytical methods that give exact results. Such methods may require delicate and expensive apparatus, and the actual determination is usually very slow if complete analyses are to be made. Ordinary plant control does not require such accurate determinations and the results, to be of value, must be obtained in the shortest possible time. Where much importance is to be attached to the analysis, it is well to have the services of an expert who is capable of operating the apparatus and has an extensive knowledge of chemistry. Large sums of money have been wasted for the erection of plants for the extraction of gasoline from natural gas because of faulty analysis of the gas. Sometimes inaccurate results have been obtained because of the method and apparatus used. It has been the unfortunate experience of the industry that standardized methods were not available so that uniform results could be obtained.

The methods for determining gasoline in gas may be found in detail in the several standard books, the bulletins of the United States Bureau of Mines, and in numerous issues of The Oil and Gas Journal. No more than a very brief outline of the more important of these methods can be mentioned here.

The two common methods that are used in the field are based on solution of the gasoline in a suitable oil or adsorption with activated charcoal; the latter being preferred for ordinary purposes. Whatever the absorbing material, a measured quantity of the gas is passed through it and then the material is heated so that the gasoline may be recovered by distillation.

Within the past few years the fractional analysis method has received much attention for the separation of the various hydrocarbons of natural gas. This method is based on the identification in special apparatus of each hydrocarbon member of the gas by its boiling point. The necessary cooling is obtained by the use of liquid air. A complete analysis may require from six to eight hours.

For recent related articles see The Oil and Gas Journal—April 17, 1930, page 147; October 3, 1929, page 209; June 19, 1930, page 46.

ALCOHOL FOR MOTOR FUEL

Have you any information covering the actual use and character of the alcohol fuel reported to be in use in South America?—A. R.

The successful use of alcohol as a fuel in railway motor cars is claimed by the Brazilian railway which recently conducted an experiment on the line between Rio and Sao Paulo, according to a report from Vice Consul Rudolf E. Cahn at Rio de Janeiro, by the Department of Commerce, announced June 19.

The fuel used consists of 43 degrees alcohol with an addition of 5 per cent of ethylic ether, extracted from the alcohol itself, and one one-thousandth of methylene blue as a denaturant. The railway motor car in which it was used was manufactured by a German company; it has a capacity of 62 passengers, is provided with two motors of 100 horsepower and 1,200 revolutions, and is capable of making 84 kilometers per hour.

The experiment was made over a stretch of 500 kilometers. The outward trip was made in 11 hours and 44 minutes running time, and the return trip in nine hours and 51 minutes. The consumption of gasoline for these motor cars was reported by the manufacturers as 1 liter per kilometer. The actual consumption of alcohol was 1.1 liters per kilometer.

A continued use of alcohol in this way, according to Brazilian opinion, would prove a benefit to the sugar industry as alcohol can be made from the domestic sugar cane while gasoline has to be imported. The Brazilian sugar industry has been suffering losses during the past two years, due to overproduction and the difficulty in competing in foreign markets. The last harvest is calculated to have been 30 per cent below the previous one because many farmers have abandoned their crops in view of low prices. The increasing use of alcohol would therefore prove an aid to the sugar industry.

At the time the experiment was under consideration one of the technical representatives of the manufacturers of the motor cars stated that they were built for the consumption of gasoline and his company could not be held responsible for any derangement caused by the use of alcohol. The motor, of course, was slightly altered to use this domestic fuel, but details of these alterations were not given.

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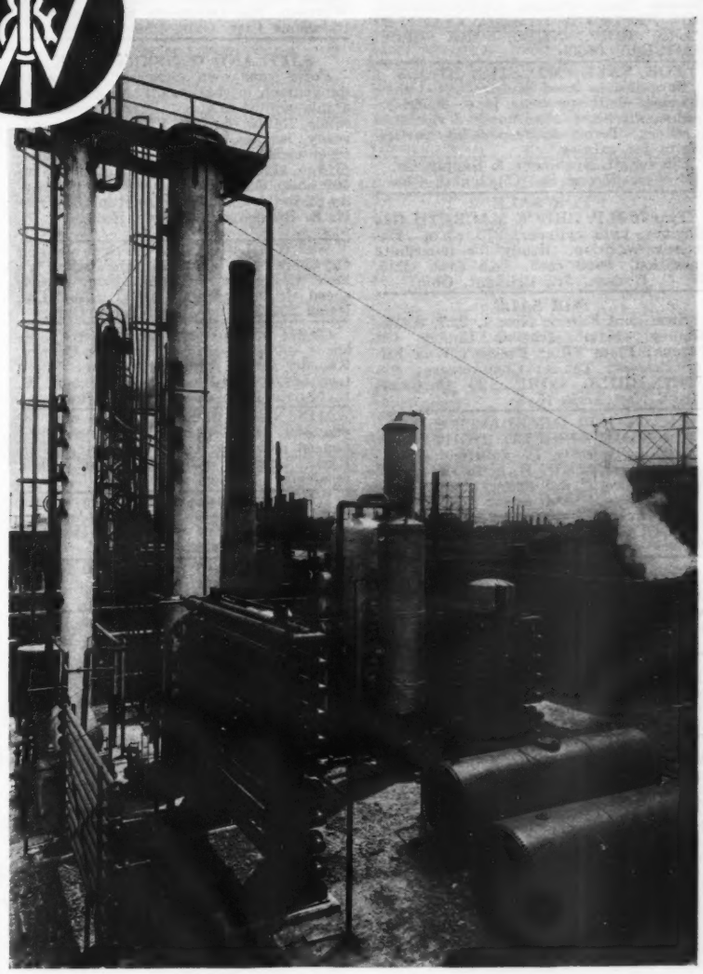

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Chicago Situation Is Much Improved

Consumption Was Very Heavy, Some Stations Even Rationing Buyers. Requisitions Against Contracts Were Large

By J. B. Waldo

CHICAGO, July 7.—The consumption of gasoline is reported by the leading distributors in this territory to have been very heavy all over the territory. No exact figures are yet available; even the local stations of the smaller companies have not yet made up their reports of sales but it is known that they were heavy. In a number of instances these local stations ran so low on gasoline that they rationed their customers, confining their sales to any one motorist to 5 gallons. The spot market was not active this morning, most of the spot buyers having gasoline in transit for immediate needs but their orders are expected to be received later. Requisitions against contracts were again large and local offices have been sending a large number of shipping instructions down to the refineries which will give them a good start for the month. Locally spot gasoline prices are unchanged with the bulk of the spot business going at 6 to 6⅛ cents. Jobbers in Michigan and Ohio report they are being offered U. S. Motor gasoline out of East Chicago by a leading refiner at delivered prices which net back to Group 3 at 5½ cents and in Illinois and Indiana points out of either East Chicago or Wood River at prices which net close at 5¾ cents. There seems to be a real contest on between the various refineries having differential freight rates to this territory and parts of it for the going business. It was currently reported today that 30 cars of Detroit's gasoline order for 1,000,000 gallons was taken by the White Star Co., at a price which netted a Group 3 price of not to exceed 5 cents.

There was very little doing in any other product than gasoline. Kerosene is very quiet here with 3 cents quoted for resale. One refiner came into the market and asked for help to move kerosene at 3½ cents with no response. Some figuring was being done on some contracts for furnace oil and a few scattering cars were being ordered of distillate and gas oils for immediate shipment. Prices remained unchanged. Industrial fuel oils were very quiet, no real demand manifesting itself. Reports received at local offices of major refiners state that the business being received by main offices at the refineries was very large and that from their viewpoint the situation was much improved.

More Buying Before Holiday

There was more buying during the part of the week before the Fourth but that was about all that can be said. The buying was in small lots for filling in purposes and tapered down to a very light movement on the day preceding the holiday. The jobbers had prepared for the Fourth of July trade and had some gasoline ordered to arrive shortly after the Fourth and there they were content to await the outcome of the holiday. Some refiners were also waiting to see just how large that consumption would be and if the jobbers were ready to follow it up by larger orders. If they do there will be small reduction made in the crude runs by these refineries, if the contrary is the case, then the refiner will adjust himself to the demand as he finds it then. There was little change in price locally at least. U. S. Motor gasoline was still available at 6 cents to the jobbers. Some refiners and brokers were trying for 6¼ to 6¼ cents and reported they had made sales at these prices in fair quantities but it was almost always with some understanding as to the quality of the gasoline that would be delivered. The cheaper material was generally considered of doubtful origin, it might be fairly good gasoline or it might be something very different.

Ohio Business

It is a curious fact that at the present time, there is a fairly good net back on shipments of U. S. Motor gasoline from Group 3 into Ohio and some of the refiners with either their own stations in that State or with contract customers are rejoicing in an actual profit in their business in Ohio. In Detroit territory, the cutting of prices continues and while the price for U. S. Motor gasoline delivered should be 9¼ cents, gasoline of that grade is freely offered at 8½ cents delivered Detroit. The prices quoted in eastern Michigan are very largely in line with the Detroit prices. The demand for the higher gravities has continued very quiet and prices are easy with some substituting of the higher gravities for the regular gasoline both by jobbers who want to give their trade a good motor fuel and by refiners who are shipping in some instances the higher grade for the regular product called for by their contracts. One of the Middle West refiners sold a quantity of 60-62 400 endpoint at 6 cents to the trade. Having reduced his storage the refiner has advanced his price to the trade to 6½ cents which is the very top price for this gravity. The demand for the antiknock gasolines continues strong and Ethyl is favored in the larger cities where the public is more influenced by national publicity than in the country. At many country stations the attendants claim the only ones to demand Ethyl Gasoline are the transients from the larger cities.

If the larger demand for gasoline takes up the surplus and gives the market an opportunity to demonstrate the real strength due to the consumption, then there is some reason to hope for better markets for the refiner. But the majority of the jobbing trade in this territory are convinced the season will be one of low prices. Last week in one of the oil offices here, there was quite a debate between a refiner and a couple of his salesmen and a couple of leading independent jobbers as to the high price of gasoline this season and while the refiner was inclined to hold out for a 7-cent maximum as the peak Group 3 price for U. S. Motor gasoline, the consensus was that 6½ cents would be the top price. Even with a 7-cent price there would be an ample profit for the jobber and as there has been no question raised of the ample supply of gasoline, the jobber is inclined to hold back and await developments. As one said in substance, "I have covered my July needs conservatively at the present market. About the middle of the month I shall arrange for my August requirements. After August my chief efforts will be directed to reducing the stocks of gasoline to the fall and winter level." About this time, too, the jobber with a furnace oil trade begins to push that end of his business for the coming winter. Just how large are the jobbers' stocks is a mooted question but the general opinion is that they have been reduced by the recent good gallonage and the lack of jobber buying to the point where they will require quantity replenishing. The orders against contracts indicate this is about the case even better than the spot market buying.

Kerosene Freely Offered

Kerosene is being rather freely offered at prices that are not attractive to the buyer simply because there is no demand at present. Brokers have been offered 41-43 kerosene at 3⅛ cents and jobbers are quoted as low as 3¼ cents with no orders.

Expect Stronger Fuel

The larger fuel oil dealers in this city, without a single exception so far as known, believe that a stronger market for fuel oils both industrial and domestic is bound to develop just as soon as the demand for the low cold test oils makes its appearance in the early fall. They maintain this opinion in spite of the depressed condition of the fuel oil market at present. They admit the industrial fuel oil situation here was never worse. Yet the dealers maintain that the volume of desirable oil being run especially in Oklahoma is so reduced that it is a question if it will fill the needs of the users. These large dealers in fuel oils believe that with the latter part of August or the early part of September, possibly even a little later, the major industries will resume operations on a more extensive scale than during the spring and that about the same time there will come the demand for fuel oil due to the needs of the heating plants of all kinds from those in the largest structures to the smallest bungalow or country cottage. The demand for oil for heating purposes will be larger than last season, even if the weather is no colder than it was last year. This increase will be due to the additional burners, both domestic and industrial, which have been installed. Each one of the large local dealers has had its buying departments hard at work not only here in the offices but by trips through the Southwest and one and all state that they have not been able to secure as much of the really desirable oil as they would like and what is more that the oil will cost more money. In speaking of the situation one of the largest fuel oil operators in the city, stated that there was little fuel oil coming out of West Texas and that here in July when prices were supposedly at the low point they were paying 10 cents a barrel more for the oil than they did last March in the height of the demand. The kind of oil chiefly referred to is an 18-22 gravity with a low pour test, a fairly low sulphur content and viscosity. A few years ago nearly every Oklahoma refinery turned out quantities of just such oil as well as a lot of higher gravities. But so many of these refineries have put in cracking plants and reduced the gravity of the fuel oil to around 12 degrees, that the supply of the lighter, zero oil is very limited while the demand is increased.

Locally the supply is not likely to be of much help to the fuel oil dealer or consumer unless the latter has a direct contract with some one of the refiners who distribute through their own wagons. The Shell Petroleum Corp., which has been a great standby, has contracted for its output, it claims, beginning with the fall season. At the present time it has some fuel oil which it is selling to the trade who will pay the prices asked. So long as the Globe Refinery at Lemont operates its crackers it will have none but heavy oil with a gravity around 12 degrees to supply to the local buyer and for what lighter oil it may run, if any, the price will be a good one for the refiner. The Sinclair Oil Co. occasionally has some fuel oil to sell. It has recently supplied 16-20 fuel oil at 50 cents but this supply is not regular except to contract customers. It looks very much as if the local oil buyer without a contract would find his local supplies of fuel oil much restricted just at the time when he wanted the oil the most.

Market Reflects Slow Sale

Of course what has been said is the reflection of the dealers' opinion regarding the future of the fuel oil market say six or eight weeks from now. At the present time the market is very quiet and while some of the refiners are holding their prices, the refinery market reflects the slow sale of their product. The range for a good 18-22 fuel oil with low viscosity and sulphur content is still 50 to 55 cents but there is a lot more of the 50-cent material available than a week ago. For resale a very good Oklahoma oil can be had at 47½ cents and some not so good at 45 cents. Out of West Texas some 14-18 gravity fuel oil with a fair viscosity and sulphur content is to be bought at 42½ cents the Group. The heavy 12 gravity oil is not making much headway here. There are certain industries which can use it but their demands right now are not large. It is being offered at 40 cents in car lots and on a contract could be had for a little less as refiners are very anxious to secure a market for this grade of oil.

Furnace Oils Slow

Domestic furnace oils are moving very slowly in the spot market, just an occasional car of distillate or gas oil with a little demand for the heavier fuel oils for the larger installations. The prices are practically unchanged on these small orders. The making of contracts still continues but many of the dealers have arranged for at least a part of their needs for next fall. Distributors are now busy renewing their contracts with consumers for the next winter. Very little change has been made in the form of these consumer contracts. As previously stated the contracts with distributors made by refiners and tank car dealers are with very few if any exceptions based on the published prices in a local newspaper. Many of these contracts specify the average price date of shipment but there are all sorts of basis for the contract which is easily varied. One customer may get the average while another may get the low quotation and some large buyer may be given one-fourth cent below the low price quoted for that material. In a very general way the prices made under these contracts at today's quotations would run 3 cents for prime white distillate and 2¾ cents for a straw distillate, 2¾ cents for a straw zero gas oil and 2½ cents for a dark zero gas oil. The fuel oils will run at about 85 to 90 cents for a 28-30 zero fuel oil. Of course, there is a very considerable variation from these prices according to the quality of the material and to the circumstances of the buyer. There is a distinct tendency on the part of the refiners and dealers to try and get a little more money. Besides the making of contracts there has been some selling of furnace oils in practically all grades for storage to large distributors, these sales not being on contracts but spot business done usually because of the desirable price. Some of the distributors are taking some material into storage on their contracts often by arrangement with their source of supply, thus enabling the refiner practically to make use of his customer's storage and have his own for future runs.

Gas Oil

In the U.G.I. gas oil class there has been a very moderate business doing. The gas companies are using their minimum quantities at present and profess to be entirely indifferent as to the immediate future of the market. They have for some months been able to buy at declining prices, not a large decline but each purchase has been made at a slightly lower cost in many instances and they seem inclined to wait even on the filling of their storage tanks. The

(Continued on Page 148)

Improvement in Sentiment in the East

Curtailment of Refinery Runs Expected to Have Appreciable Effect on Surplus. Some Hope for Renewed Export Buying

By A. E. Mockler

New York Bureau, The Oil and Gas Journal, Rooms 1919-21, No. 154 Nassau Street

NEW YORK, July 7.—Curtailment of refinery runs by a number of leading oil companies, with the probability that the rank and file of the petroleum industry will co-operate in the move to lower surplus stocks totals, has brought about a marked improvement in sentiment in the East Coast refined products market this week, and the trade is viewing the outlook for the balance of the year with considerably more optimism.

This reduction in gasoline production, at a time of the year when peak consumption is getting under way, is expected to have an appreciable influence upon refinery holdings, and with record sales of motor fuel it is expected that refiners will draw against storage for the remainder of the summer in larger volume than ever before in the history of the industry.

Business in the gasoline market picked up considerably during the week, tank car shipments being reported as the largest thus far in 1930. With a large part of the East enjoying a triple holiday over the week-end, jobbers were in the market for gasoline in large quantities early in the week, and likewise had large shipments rolling to reach them at the week-end to replace depleted storage stocks. With the posted price for U. S. Motor gasoline still held down to 9 cents per gallon, jobbers are "bullish" on the market outlook and are in most cases keeping storage filled at all times.

In the market for the minor products, lub oils again sold off. The remainder of the market was rather soft, but the feeling prevailed that the reduction in refinery operations will have a beneficial influence upon the entire market through the cutting down of burdensome surplus stocks which have had such a pronounced influence upon the price structure in recent months.

Tank Car Gasoline

Aside from a further increase in volume of trading, the tank car market did not undergo any radical changes. Heavy buying developed during the middle of the week, and movement continued of substantial volume. The triple holiday, as well as the beginning of the vacation season for most easterners, tended to bring about a sharp increase in consumption.

Standard Oil Co. of New Jersey and other large sellers are quoting U. S. Motor at 9 cents at East Coast refineries, with the market thence ranging up to 10 cents. Shading below the 9 cents minimum, which was thought to be a thing of the past, again cropped up, however, and bulk gasoline was being sold in tank car lots at 8½ cents in some quarters. This price, however, was believed to represent the liquidation of weak holdings in one quarter, and it is expected the market will soon firm up to the 9 cents level again.

The decision of leading refiners to cut gasoline production in an effort to make further inroads into surplus stocks was a bullish development. Stocks at refineries have shown material reductions in recent weeks, although holdings are still excessive.

Tank Wagon Gasoline

No price changes have developed in eastern territory. The market showed a considerable increase in activity, with tank wagon movement over the week-end exceptionally heavy.

Outside gasolines are selling at extremely low prices in the metropolitan area, some independents selling at 12 cents at retail, including the State tax of 2 cents. The posted price on leading brands, however, is unchanged at 18.3 cents, with premium fuels at 21.3 cents.

Lubs

Seasonal expansion in consumption has tended to bring about a slightly better feeling in the cylinder oil market, but this improvement has not yet reached the stage where any favorable developments in the price structure have eventuated and further downward readjustments are noted. Refiners' holdings are still large, and there is considerable selling pressure in some quarters which is militating against any immediate market recovery.

Prices at which cylinder stocks are available are 1 to 2 cents per gallon under last week. Spot 600 steam refined is quoted at 21 cents, with 630 at 23 cents and 650 at 27 cents. On 600 Pennsylvania flash, the market remains nominally held at 33 cents with 630 flash at 36 cents. Oil City E is available at 30 cents, with Warren E at 1 cent over this figure. Bright stocks are quoted at 35 cents for light and 33 cents for dark, 2 cents off in each instance.

Compounders and blenders have been buying spot stocks in a better way this week, and indications are demand will show further improvement as the summer progresses and consumption continues to gain. It is still a buyers' market, however, and until the price pendulum shows a definite swing in the other direction, buyers are not expected to place any forward delivery contracts.

Red and pale oils were without quotable change, business holding up fairly well along routine lines.

Paraffin Wax

Small lot buying is still the order of the day in the wax trade, with the market favoring the buyer. There have been a few fair sized lots traded, but prices remain at low levels.

Refinery holdings of wax are over large, and with markets for other products in unfavorable position, there has been some selling pressure developing on paraffin wax on the part of refiners who are anxious to partially liquidate their surpluses. Until these stocks are moved into consuming channels, the outlook for the market remains bearish. There were no further price changes recorded.

Kerosene

Slight improvement in the demand for kerosene has again been in evidence, and refiners are a little more optimistic regarding the outlook over the summer. Plans for curtailment of refinery runs, it is believed, will have a beneficial influence upon the market and will tend to relieve the pressure of distressed stocks which some of the smaller interests have been throwing on the market during recent weeks.

The posted price for water white at local refineries continues unchanged at 7¼ cents, but business is being freely done at 7 cents, and in some instances, where competitive kerosene from outside sources is available under 7 cents, refiners are reported meeting this competition to hold established outlets. Jobbers, who had been practically withdrawn from the tank car market for a few weeks, were back in the market, and a moderately active movement was reported.

Tank wagon kerosene prices have shown no change over the territory, but marketers report they are getting an increased volume of business. Most of the filling stations operated by the large companies now stock kerosene, and considerable quantities of this oil are being used for flushing crankcases, in addition to the retail sales made at the company stations. Summer resort buying is also an important factor in increasing consumption in the East Coast area, marketers declare.

Gas Oil

The posted price for 28 plus recycled stock remains unchanged at 5¼ cents, bulk at refineries, but as has been the case for some weeks this quotation is being freely shaded by a quarter to a half cent.

Current volume is seasonably light, both in the jobbing market and in contract deliveries to large industrial consumers. Manufactured gas companies generally experience minimum requirements for gas oil during July and August of each year, and this year promises to be no exception to the general rule.

Shipments of California gas oil to East Coast markets has fallen away during several weeks, and the trade does not look for much of a movement of the Pacific Coast stock eastward until fall and winter demand sets in.

Fuel Oil

The announced intention of leading refiners to curtail refinery runs has tended to bolster the position of the fuel oil market, and a fairly steady undertone prevails. The East Coast refinery market has, with few exceptions, been maintained firmly at posted prices since the 10-cent per barrel advance to $1.15, bulk, at terminals, a few months ago and maintenance of this level appears reasonably well assured. There have been some instances of price cutting locally and at ports other than New York, and with the Gulf and Mexican markets weakening, some concern had been expressed over the outlook for the eastern market.

With the refining branch of the industry apparently determined to bring about drastic curtailment in overproduction, with ultimate limiting of surplus stocks to actual working needs, the fuel oil outlook is greatly improved.

Steadily widening demand for bunker "C" oil for marine uses is reported, but industrial demand is still rather sluggish. The industrial market is not as strong as the marine market. The New York Central Railroad opened bids for approximately 47,000 bbls. of bunker "C" per month for the remainder of the year, Mexican Petroleum getting the business at $1.14 per barrel, refinery, top.

Diesel Oil

This division of the market continues to run smoothly, and posted prices of $2 per barrel, bulk, refinery, are being maintained by all of the principal sellers.

Marine consumption is picking up steadily, and domestic demand is also consistently expanding. While sales figures for the first half of the year are not yet available, it is indicated that substantial increases in gallonage over the first six months of 1929 were registered by the principal sellers.

Diesel oil stocks at East Coast refineries have been well held thus far in the year, and the statistical position of the market, from the standpoint of surplus stocks, will be further improved by the general program of refinery curtailment.

Gulf Export Market

No additional cargo fixtures were reported in the Gulf market. While there is a good movement of motor fuel out of the Gulf into world markets, fewer inquiries are reaching the market due to the fact that much of this business is now being handled by American companies for the account of their own foreign marketing subsidiaries. Kerosene and fuel oil were likewise slow, so far as Gulf export operations were concerned. No fixtures of Venezuelan or Mexican crudes were reported.

Local operators are showing considerable interest in reports of a pending cut in the posted price schedule for gasoline and naphthas at the Gulf. While no definite information is available regarding the possibility of such action, it is generally believed here there will not be any change in the market for the next 30 days, at least.

Petroleum Exports

A slight pick up in export volume was reported locally, and definite indication of improved business is reported in the number of new inquiries reaching export operations. It is generally felt in trade circles that an immediate increase in export trading would develop with stabilization of the markets for refined products, but pending a definite indication of a reasonable amount of permanency for spot prices, foreign buyers are not willing to come into the market in a large way.

The following table shows principal exports of refined petroleum products from New York for the past three weeks (all figures in gallons unless otherwise noted):

	Week ended		
	June 28	June 21	June 14
Gasoline	250,000	590,000	130,000
Naphtha	745,000	105,000	535,000
Kerosene	35,000	12,000	33,000
Fuel oil	180,000	10,000	109,000
Lubricating oil	1,180,000	895,000	908,000
Petroleum, refined	925,000	1,040,000	2,326,000
	Pounds		
Petrolatum	25,000	54,000	35,000
Paraffin wax	920,000	1,065,000	1,611,000
Refined	275,000	.....	.....
Scale	.....	302,000	223,000
Lubricating grease	845,000	725,000	1,603,000

While reports from European markets continue bearish, so far as sales are concerned, operators here believe there is considerable deferred demand which may be expected from abroad. Foreign distributors, it is believed, have permitted their reserve holdings to dwindle to the vanishing point, rather than buy American refined products on a falling market, and will be forced into the market here in the near future for considerable replacement stocks. The present position of the market, it is felt, offers an advantageous opportunity for foreign distributors to obtain refined products to replenish their holdings, and gives rise to the belief that considerable buying will set in as soon as the markets steady a little.

Imports

Imports of crude and refined oils at the principal United States ports for the week ended June 28 totaled 1,625,000 bbls., a daily average of 232,142 bbls., compared with 2,029,000 bbls., a daily average of 289,857 bbls. for the previous week and a daily average of 276,929 bbls. for the four weeks ended June 28. Details follow:

(Barrels of 42 Gallons)

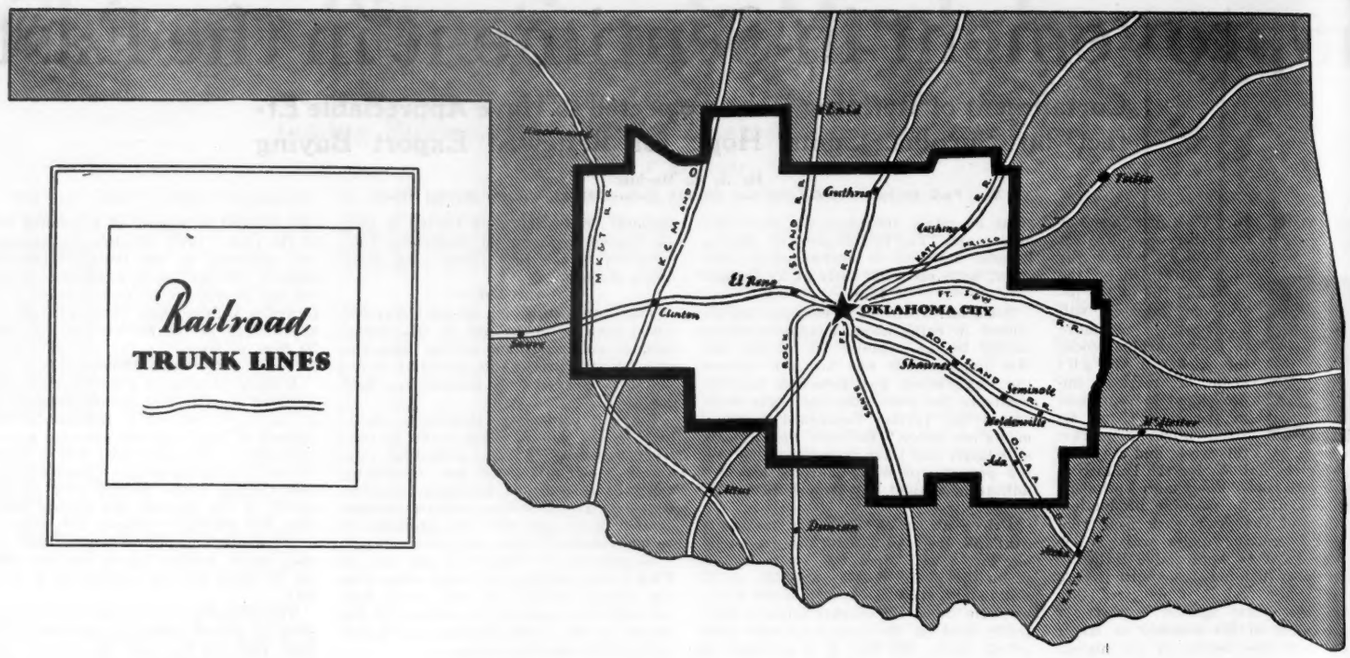
At Atlantic Coast Ports—	
Baltimore	132,000
Boston	161,000
New York	803,000
Philadelphia	320,000
Others	65,000
Total	1,481,000
Daily average	211,571
At Gulf Coast Ports—	
Galveston District	66,000
New Orleans and Baton Rouge	78,000
Total	144,000
Daily average	20,571
At all United States Ports—	
Total	1,625,000
Daily average	232,142
Daily average four weeks	276,929

Distribution of total imports is as follows:

Crude	1,262,000
Gasoline	300,000
Fuel oil	63,000

While Venezuelan production of crude is being curtailed steadily, it is not expected that shipments to the United

(Continued on Page 148)



Oklahoma's Central Area,

producing 66.6% of Oklahoma's Oil,

is served from 7 to 24 hours quicker

from Oklahoma City

66.6% of the oil in Oklahoma is produced in the Central Area. 66.2% of all the rigs and drilling wells in the state are also in this area, May 1, 1930. Many manufacturers of oil field equipment have solved the problem of quick service to this fast growing and most active market in the state by locating a branch or warehouse in Oklahoma City.

From here, seven railroads operate 164 Steam and Electric passenger, and 64 freight trains each day. More than 312 cities and towns in Oklahoma, mostly in the Central Area, are served daily with motor bus passenger, express and freight service out of Oklahoma City.

By actual test, Seminole, Earlsboro, Maud, St. Louis, Asher and the Logan, Payne, Caddo and Grady County pools and even those in the Texas Panhandle are reached from 7 to 24 hour's quicker from Oklahoma City than from any other distributing point in the state.

And of course, it is but half an hour's haul to the greatest pool in the area . . . the Oklahoma City field.

Many desirable locations are still available to those manufacturers of oil field equipment who can see the advantages of being close to their market.

Dependable, economical electric power is available from the state's largest interconnected power plant and transmission line system, at attractive industrial rates.

It will pay you to investigate the possibilities of Oklahoma City.

OKLAHOMA CITY
CHAMBER OF COMMERCE
OKLAHOMA CITY, OKLAHOMA

Best Service to All Fields

May 28, 1930

Oklahoma City Chamber of Commerce,
Oklahoma City, Okla.

Attention: Mr. Stanley C. Draper, Mgr.

Dear Sir:

Replying to your inquiry as to why we located in Oklahoma City, we decided to locate here for the following reasons:

It is the center of the Mid-Continent Oil Country, and transportation facilities are such that we can best serve all parts of the entire Oil Country from this point both as to domestic trade and various ports for export.

Living conditions, schools etc, are of the best, which makes it attractive to the better class of skilled labor.

Banking relations are very satisfactory with splendid spirit of co-operation.

Due to its advantages, and present oil developments throughout this territory, Oklahoma City should rank as the Mid-Continent distributing point for manufacturers of Oil Well Supplies.

Yours very truly,
BRAUER MACHINE & SUPPLY CO.
By- Go. Danielson

GD:s

Natural Gasoline Manufacture

ASK FOR FRANCHISES FOR LIQUEFIED GAS

LOS ANGELES, Calif., July 5.—The Natural Gas Corp. of California, a subsidiary of the Pacific Public Service Co., which is a subsidiary of the Standard Oil Co., has been granted a certificate of public convenience and necessity by the Railroad Commission to exercise franchise rights for the distribution of liquefied petroleum gas, or natural gas, in 10 cities located in six counties, according to a statement issued by the commission.

"The company has applied to the commission for authority to serve a large number of other communities extending from Arcata on the north to Indio on the south, upon which hearings have not yet been held by the commission, but are scheduled during the next few months," the statement said.

The gas to be served, according to the statement, will have a heating value of 550 British thermal units per cubic foot, and will be prepared and delivered from a central mixing plant with adequate storage facilities in each community, or group of communities, served.

The commission announced that rates for the authorized service have been fixed at $1.50 per 1,000 feet per meter per month for the first 2,000 feet used, $1.25 per 1,000 for the next 3,000 feet, and $1 per 1,000 for all gas used in excess of 5,000 feet per month, all in addition to a service charge of $1 per meter per month.

The cities to be served under the present authorization were stated by the commission to be Fairfield, Vacaville and Rio Vista, Solana County; Isleton, Sacramento County; Winters, Yolo County; Corning, Tehama County; Orland, Glenn County, and Maxwell, Williams and Arbuckle, Colusa County.

The commission also announced that the Coast Counties Gas & Electric Co. has been authorized to exercise franchise rights granted by the board of supervisors of San Benito County to extend its natural gas line from a point on the "coast" transmission line of the Pacific Gas & Electric Co. in that county and to serve natural gas in the towns of Hollister and San Juan.

NEW ABSORPTION PLANT

CHATHAM, Ontario, July 5.—Announcement has been made that the Regal Oil & Refining Co. will increase the capacity of its Calgary refinery by 50 per cent, and will also construct the first unit of an absorption plant in the Turner Valley Field, with a daily capacity of 50,000,000 feet of wet gas. The unit is to cost approximately $300,000.

The product of the plant will be natural gasoline and dry gas, which will be handled by the Regal company.

GASOLINE MEN ORGANIZE CLUB

A study club for Empire Oil & Refining Co. gasoline plant superintendents and assistants in the Seminole, Konawa and Okemah areas has been organized in Seminole, Okla. E. R. Estus was elected first president of the new organization, the purpose of which is to foster the study of various phases of the natural gasoline industry. The other officers are L. A. Sperry, vice president, and C. F. Fischer, secretary-treasurer. J. W. Wilson, district superintendent, was appointed chairman of the program committee.

BUYS FIFTIETH PLANT

Phillips Petroleum Co. announced the purchase of the complete natural gasoline plant of the Dixon Creek Oil Co. near Borger, Tex.

PRODUCTION IN MAY DECREASES WITH BIG INCREASE IN STOCKS

The production of natural gasoline during May, 1930, amounted to 189,300,000 gallons, a daily average of 6,110,000 gallons. This compares with the daily average of the previous month of 6,200,000 gallons but is 4 per cent above the daily average of May, 1929.

The production of natural gasoline in the Oklahoma City Field increased but the output of the remainder of Oklahoma showed a material decline. The daily average production in the other two major producing States, California and Texas, was practically stationary as compared with April.

Stocks of natural gasoline held at the plants increased materially and amounted to 38,657,000 gallons on May 31 as compared with 29,791,000 gallons on hand at the beginning of the month. The major portion of this increase in stocks was recorded in Oklahoma and in the Texas Panhandle.

(Thousands of gallons)

	Production				Stocks end of month	
	May, 1930	Apr., 1930	May, 1929	Jan.-May, 1930	May, 1930	Apr., 1930
Appalachian	6,700	8,100	8,000	44,700	4,939	4,328
Ill., Ky., etc.	1,000	1,100	1,200	6,100	587	530
Oklahoma:	53,400	53,800	58,600	258,000	16,704	11,472
Oklahoma City	*3,600	2,900	(†)	12,100	859	479
Osage County	6,100	6,800	6,700	31,800	4,606	4,060
Seminole, etc.	24,900	25,100	30,300	119,600	3,903	2,248
Rest of State	*18,000	19,000	21,600	94,500	7,336	4,685
Kansas	3,000	3,000	3,000	14,200	1,530	969
Texas:	42,100	40,200	34,100	196,400	11,566	9,116
Panhandle	21,900	20,600	13,400	100,000	4,945	3,860
North Texas	3,800	3,600	4,200	18,300	1,397	1,196
West Central	12,600	12,400	12,900	60,700	4,572	3,603
Rest of State	3,800	3,600	3,600	17,400	652	457
Louisiana	6,000	6,000	4,900	33,200	709	635
Arkansas	2,800	2,700	2,700	13,000	337	361
Rocky Mountain	4,600	4,500	4,300	20,500	675	598
California	69,700	66,600	65,600	345,000	1,610	1,782
Long Beach	14,400	14,300	19,500	72,700	.....	.....
Ventura Ave.	4,900	4,600	6,500	25,500	.....	.....
Seal Beach	2,300	2,300	3,700	13,600	.....	.....
Huntington Beach	2,700	2,700	3,400	14,900	.....	.....
Santa Fe Springs	17,200	16,600	16,600	97,300	.....	.....
Rest of State	28,200	25,900	15,900	121,000	.....	.....
Total	189,300	186,000	182,400	931,100	38,657	29,791
Daily average	6,110	6,200	5,880	6,170	.....	.....
Total (thousands of bbls.)	4,507	4,428	4,343	22,169	920	709
Daily average	145	148	140	147	...	...

*Revised. †Included under "Rest of State."

Construction and Operation

GAS MEASUREMENT*

In the preceding article it was stated that the largest single item in the cost of manufacturing natural gasoline was the raw material—casinghead gas. The purchase of gas is, on this account, so important that every phase thereof is supervised by the general office.

The field is generally broken up into districts comprising from 90 to 100 meters or stations. Experience has shown that one meter man can take care of a district of this size if the plants are within a radius of 100 miles. The meter man is like the gas tester who covers the same district, autonomous in matters pertaining to his special work, and is subject to instructions of the head tester or meter man and the general office.

The meter man has a car assigned to him for transportation of himself, and tools and equipment. He is expected to visit every meter to make an inspection once each month. At the same time that "settlement" tests are made, the meter men of buyer and seller officially check and calibrate the meter. The rest of the time of the meter man is spent making repairs of meters where "bad order" meters are reported by the local plant operatives. He installs meters on new leases and reports to the general office when such connections are made and the first gas is passed to the plant.

In some organizations the plant meter reader is taught many of the meter repairs and is expected to make them, thus relieving the district man who can then make inspections of and repairs to the many controlling and recording devices that are now finding increasing use and favor in gasoline plants. The examination and cleaning of orifice plates on meter settings are also often passed on to the plant meter man, although the district meter man will check plates from time to time to know that they are being maintained in perfect condition. The accumulation of rust or grease on the edge of the orifice may result in wide deficiencies in the differential recorded.

In flush areas charts are read by the plant staff in order that plant efficiency may be checked promptly and readily without the loss of time incident to general office reading. When the gas is settled to the point where there is very little variation in daily volume of gas passing through the meter, the charts may be sent to the general office for reading, although the plant will note the charts for peculiarities on the several leases so that "odd" charts may be read forthwith and the lease trouble located without delay.

If the charts are first read in the field, they are cross-checked in the office in most operating companies. Chart readers in the field do not as a rule hold their positions for a long time. Often these jobs are filled for a turn by men who are obtaining experience as general, all-around gasoline men who may take the chart readers' or clerks' jobs with serious intentions but who tire of them as soon as they have mastered the work. Rereading charts in the office can be done rapidly and at relatively little expense.

Reading Charts

Charts are now almost universally read with improved planimeters by which the exactness of the eyeball, "hourly" method can be duplicated at a fraction of the time required by the latter method. The J. B. McGaughy planimeter, really a sort of square root integrator, invented by McGaughy, has made chart reading a mechanical function and one yielding results satisfactory to the most exacting reader. At the same time a good deal of the drudgery has been taken from chart computation work.

The gas accounting division is responsible for the "gas accounting" and furnishes the operating department with information relative to gas volumes and gas costs, based upon the daily volumes "read" and the last previous settlement tests. The accounting division is charged with the responsibility of paying for the gas in accordance with the terms of the contracts governing the purchase of the gas, and determines to whom checks are to be made and to whom royalties are to be paid, certifying the same to the treasury department whence the checks are mailed. Sometimes gas from one small lease calls for the issuance of a dozen statements and checks, as, for example, when the royalty is owned by a dozen interests.

The gas accounting division furnishes records of gas produced or utilized to various state and federal agencies. Sometimes these demands become burdensome but under the circumstances the company is obliged to perform and grin.

The matter of gas purchases and accounting is not a routine matter as it is too often considered. Methods, equipment, contracts and accounting change from time to time. Equipment in the field must be kept in first-class condition, and the overhead must be kept down if the job is to be considered well done. That it must be well done need not be argued. One needs only to remember that on the basis of gas accounting for casinghead gas used each month, $3,750,000 is paid by the industry to the producers of this gas.

*Eighteenth of a series of articles explaining the inner workings of a natural gasoline organization. The series was prepared by an operator actively engaged in all phases of construction and operation.

SMALL PRODUCTION GAIN AT CALIFORNIA PLANTS

One hundred forty-one natural gasoline plants in California with a daily indicated capacity of 2,526,600,000 feet, report a recovery of 69,684,744 gallons of natural gasoline from 51,475,212,000 feet of gas treated in May. This is an increase of 630 bbls. in daily average production.

Utilization of natural gasoline amounted to 1,401,668 bbls., a decrease under April of 130,671 bbls. Daily average utilization of 45,215 bbls. was 8,306 bbls. less than daily average production of 53,521 bbls.

Stocks of natural gasoline at the end of May amounted to 2,197,733 bbls., of which 38,323 bbls. were reported by natural gasoline plant operators and 2,159,410 bbls. by refinery operators. This is an increase of 257,493 bbls. over April stocks. This stock figure of 2,197,733 bbls. is approximately 48½ days' supply at the current rate of consumption.

California Natural Gasoline Production, May, 1930

Production by fields—	Gas treated (thousand cu. ft.)	Natural gasoline produced (gallons)
Fullerton and Whittier	737,074	1,377,083
Midway	2,725,564	4,264,934
Huntington Beach	966,061	2,724,792
Long Beach	7,650,848	14,442,884
Richfield	849,668	948,384
Santa Fe Springs	13,734,057	17,191,625
Seal Beach	1,386,027	2,295,317

(Continued on Page 150)

Brief Items for Petroleum Refiners

Gasoline Price War On the Pacific Coast Most Serious in Years

LOS ANGELES, Calif., July 8.—The gasoline war which has been raging in Washington, Oregon and California during the past month has resolved itself into a dog fight to use a slang expression and the final outcome is still in doubt. The Macmillan Petroleum Co. is making a personal bid for public support in an effort to restore original gasoline prices. This company is making a concerted attempt to retail gasoline in Los Angeles territory at 19½ cents as compared with the prevailing price of 12½ cents.

Macmillan Petroleum is basing its appeal for public support through the medium of newspaper advertisements and radio contact and requests the public to purchase its gasoline in order to maintain prosperity, continue competition and save the independent refineries from destruction. This company charges that "the major companies are carrying on a ruthless price war, selling gasoline from 5 to 10 cents below its actual cost delivered to consumer. If the present price war continues many independent refineries, a great industry in California, will be wiped out, their employes thrown out of employment, their buying power withdrawn from business and a great investment thrown into the dumpheap. Purchasers of gasoline can end the war if they will buy gasoline at the restored price of 19½ cents. The purchaser who refuses to pay the restored price courts disaster for California and thereby hurts himself."

Although Macmillan charges the major companies with responsibility for the present gasoline war it may be more the result of general competitive conditions than premeditated price slashing. The present situation is causing considerable losses but no one seems able to apply the brakes notwithstanding that some of the major companies have reluctantly reduced prices and are not in sympathy with the wholesale reduction which has taken place during the past several weeks. The present gasoline war for this reason has resulted in the most serious condition which has confronted the California oil industry in several years.

MOVE GENERAL OFFICES

Effective July 15 the general sales offices of the Amarillo Producers & Refiners Corp. and affiliated companies will be located at 530 Amarillo Bldg., Amarillo, Tex. The offices at present are located at Del Rio, Tex.

In addition to the Pyote, Tex., refinery of the Amarillo company the sales of the Del Rio Refining Co. will be handled at the Amarillo offices. The Del Rio refinery is located at Del Rio. The invoicing and books for the latter company will be retained at Del Rio.

When completed the Amarillo office will have charge of sales for the refinery under construction at Kings Mills, Tex., by the Navajo Refining Co. This plant which will have a capacity of 3,000 bbls. daily will be completed and operations started this month.

SQUIRE WITH PAN-AMERICAN

CHICAGO, July 5.—G. K. Squire has been appointed as manager of the lubricating oil department of the Pan-American Petroleum & Transport Co. He will have charge of domestic and export sales of lubricating oils. He has been with the Standard Oil Co. of Indiana, in its lubricating department for seven years.

A. F. H. PAYNE IS MADE SHELL REGIONAL HEAD

A. F. H. Payne has been appointed central regional manager for the Shell Petroleum Corp., with headquarters in St. Louis, Mo. Mr. Payne, who succeeds G. A. Burns, recently appointed northern regional manager, with headquarters in

A. F. H. Payne

Chicago, has been with Shell for more than 10 years. Joining the company in 1919, he served in various sales capacities. He was made Indiana division manager in 1925. In 1929 he was made assistant to the manager of distribution, which post he held until his recent promotion to regional head.

Mr. Payne now has under his supervision the sales activities of Shell in the territory extending from the Canadian border to the Gulf of Mexico and from the Mississippi River to the Rocky Mountains including territory in the Rocky Mountain region.

TIDE WATER AWARDS PRIZES

NEW YORK, July 8.—The Central Suggestion Committee of the New York office of Tide Water Oil Co. has announced the major awards granted annually to employes offering the best suggestions during the previous year. These major awards are offered as an incentive to employes to put their ideas to work and to encourage them to send in suggestions which will lead to improvements in the plant or cut down waste.

The winners of the awards are as follows:

Henry Schiffbauer, Pipe Shops: Device for cleaning coke deposit from the re-boiler bypass lines at the cracking coils—$200.

Vincenzo Maita, Masons Department: Improved methods of insulating reboilers and lines at the cracking coils—$150.

LeRoy La Point, Cracking Coils: Simplified hookup for tar system at the cracking coils—$150.

William P. Hughes, Refinery Agitators: Suggestion for better operation of the agitators and reduction in the loss of chemicals used—$100.

The following were given awards for the greatest number of suggestions accepted during 1929: Walter Eley, West Fence Battery, first prize of $50; John Rooney, Yard No. 1, second prize of $25; Vincenzo Maita, Masons Department, third prize of $25.

SINCLAIR TAKING OVER PIERCE OIL PROPERTIES

Effective July 1 the Sinclair interests started the consolidation of Pierce Petroleum Corp. properties. The action follows the formal approval by stockholders of the Pierce corporation, of a stock exchange agreement announced in June by officials of the two companies.

Although no official announcement has been made it is understood that the Sinclair companies intend dropping the Pierce name immediately in taking over the Pierce operations. The trade-mark name of Pennant for many years associated with the Pierce corporation will be retained at Pierce stations. The Pierce terminals in Missouri and Oklahoma which combine resturant accomodations with all types of oil and tire service for tourists trade are now operated under the name of Sinclair-Pennant Terminals. Terminals at Rolla and Columba, Mo., also have hotels which are being operated by the new owners.

The only operating refinery of the Pierce corporation which is located at Sand Springs, Okla., has been taken over by the Sinclair Refining Co. and placed under the general management of the manufacturing department. C. R. McKay who has been superintendent of the refinery has been retained by the Sinclair management in the same capacity.

All the Pierce bulk and retail stations are being operated by the Sinclair Refining Co. It is understood that the general offices of the Pierce headquarters at St. Louis will be made a division office. Crude oil producing properties are being taken over by the Sinclair Oil & Gas Co. and the pipe lines will be made a part of the Sinclair Pipe Line Co. system.

D. D. MacGREGOR OFF TO BUILD PLANT IN JAPAN

SAN FRANCISCO, Calif., July 8.—A definite step toward the erection of an oil refinery in Japan, to be operated jointly by the Associated Oil Co. and the Mitsubishi interests, is seen in the departure of D. D. MacGregor, representative of Associated, to take up his duties as vice president of the Mitsubishi Oil Co., Ltd.

Mitsubishi Oil Co., Ltd., in the near future will commence erection of the refinery near Tokio under Mr. MacGregor's supervision. The plant is to be a complete modern refining unit, with a capacity of 4,000 bbls. of crude per day and a cracking capacity of 1,500 bbls. daily. The refinery will be equipped to manufacture gasoline, distillates, lubricating oil, fuel oil and other petroleum products which will be marketed in the Empire of Japan, Korea, Formosa and other portions of the Orient. The crude oil requirements of the refinery will be furnished by the Associated from its California production.

Mitsubishi Goshi Kaisha, Ltd., holding company under which the Mitsubishi Oil Co., Ltd. operates, is one of the largest industrial enterprises in Japan.

CRUDE FOR WICHITA REFINERS

Refiners of Wichita, Kans., will have a close-in crude oil supply due to the discovery of production adjoining the city limits. Two wells have been completed with a production of 1,800 bbls. daily and seven wells are drilling.

The Golden Rule Refining Co., with a refinery in Wichita, has started the construction of a 3-inch line connecting to the field. The Derby Oil Co. and Barnsdall Refineries, Inc., both of which have refineries in Wichita, will also connect their pipe lines to the field.

MADE GENERAL MANAGER OF BAYTOWN REFINERY

HOUSTON, Tex., July 7.—R. E. Powell, superintendent of the Baytown refinery of the Humble Oil & Refining Co., has been promoted to general manager, a new position created at the plant. To succeed him F. N. Read has been appointed superintendent. W. R. Brison, C. E. Carlson and A. C. Kraft, all on the operating staff at the plant, have been named assistant superintendents.

Under Mr. Powell's superintendency, the Baytown refinery has been enlarged

R. E. Powell

from a comparatively small plant to one of the country's largest with a capacity of more than 125,000 bbls. In addition to the Baytown works which is one of the largest refineries in the petroleum industry, the Humble company, a subsidiary of the Standard Oil Co. (New Jersey), operates six other plants in Texas. These refineries are in Inglesides, McCamey, San Antonio, Chilton, Breckenridge and Neches. All of the Humble plants are located in Texas, with a capacity in excess of 175,000 bbls. daily.

START REFINERY CONSTRUCTION

The Continental Oil Co. has begun construction work on its new refinery to be located at Denver and it is expected to be ready for operation by the end of the year. The Petroleum Iron Works has begun the construction of 23 storage tanks of 55,000 to 100,000-bbls. capacity each.

The Midland Oil Refining Co. reports that it has broken ground for a refinery on the Atchison, Topeka & Santa Fe Railroad in Denver to cost $250,000. L. M. Hines is president. This company some time ago purchased the equipment of a plant built at Riverton, Wyo.

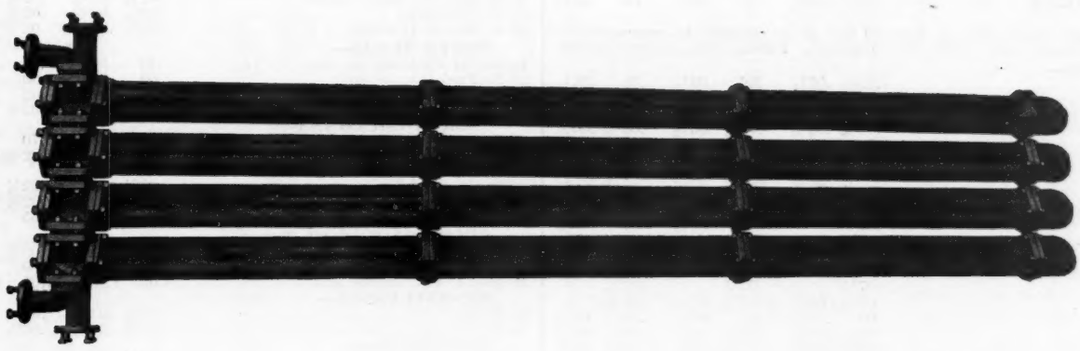
JOINS MID-CONTINENT FORCES

CHICAGO, July 5.—John Stapp who has been traveling in northern Illinois for the Barnsdall Refineries, Inc., has joined the forces of the Mid-Continent Petroleum Corp. as a station supervisor.

PLANT SHUT DOWN

The new refinery of the Laurel Oil & Refining Co. at Laurel, Mont., is shut down temporarily for some changes to be made in the still construction. The plant operates largely on Oregon Basin crude

An efficient and durable heat exchanger or cooler for dirty or corrosive oils



The G-R Tubeflo Section

(PATENT APPLIED FOR)

EXCHANGE of heat between crudes and still bottoms, or other dirty or corrosive oils is best accomplished by means of G-R Tubeflo Sections. This unique heat exchanger or cooler resists corrosion because of its special cast construction, is easy to clean because of its straight, smooth, large-bore passages, and is extremely efficient because of the high velocity and low pressure drop of the liquids flowing through the unit.

Several additional advantages are also provided by the patented construction of the G-R Tubeflo Section, including flexible capacity, high salvage value, and ease of transportation and assembly. This apparatus is concisely described in a leaflet which will be sent on request.

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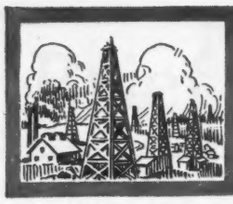


REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

GASOLINE AND NAPHTHA

OKLAHOMA (Group 3)—	July 8		July 1		June 24	
50-52 450 endpoint	.05¾	.06¼	.06	.06¼	.06¼	.06¾
56-58 450 endpoint	.05¾	.06¼	.06	.06¼	.06¼	.06½
*58-60 437 endpoint (U. S. Motor)	.0666		.07705		.06666	
*60-62 437 endpoint	†.06¼	.06¾	†.06¼	.06¾	†.06¼	.06¾
*60-62 400 endpoint	.0725		.07375		.07375	
*64-66 375 endpoint	.0775		.08		†.07	.07¼
68-70 360 endpoint	.07¼	.07½	.07¼	.07½	.07¼	.07½
64-66 437 endpoint (blend)	.05¾	.06¼	.06	.06¼	.06	.06¼

*Weighted average prices July 7, June 30 and 23 as reported by representative refiners. Sales to jobbers only. †No sales reported. Prices show general market.

NORTH TEXAS—						
50-52 450 endpoint	.05¾	.06¼	.06	.06¼	.06	.06¼
58-60 450 endpoint	.05¾	.06	.05¾	.06	.05⅞	.06
58-60 437 endpoint (U. S. Motor)	.05⅞	.06¼	.05⅞	.06¼	.06	.06¼
60-62 400 endpoint	.06⅛	.06½	.06¼	.06½	.06⅜	.06⅝
64-66 390 endpoint	.06⅜	.06¾	.06½	.06¾	.06½	.06¾
64-66 375 endpoint	.06½	.07	.06¾	.07¼	.06¾	.07¼
68-70 360 endpoint	.07	.07½	.07¼	.07½	.07¼	.07½
64-66 437 endpoint (blend)	.05¾	.06¼	.06¼	.06½	.06¼	.06½
*NORTH LOUISIANA—						
58-60 437 endpoint (U. S. Motor)	.07		.07	.07¼	.07	.07¼
*ARKANSAS—						
58-60 437 endpoint (U. S. Motor)	.07		.07		.07	
PENNSYLVANIA—						
52-54 Naphtha	.07¼		.07¼		.07½	
54-56 Naphtha	.07½	.07¾	.07½	.07¾	.07¾	
58-60 Gasoline	.08	.08¼	.08	.08¼	.08¼	.08½
60 Gasoline	.08	.08½	.08¼	.08½	.08¼	.08½
62 Gasoline	.08¼	.08½	.08½	.08¾	.08½	.08¾
64 Gasoline	.08½	.08¾	.08½	.08¾	.08½	.09
68-70 350 endpoint gasoline	.08¾	.09	.08¾	.09	.09	
CALIFORNIA—						
†58-60 437 endpoint (U. S. Motor) domestic	.05½	.06½	.07	.07½	.07	.07½
CHICAGO DISTRICT (Based on Group 3)—						
50-52 450 endpoint (Naphtha)	.05¾	.06	.05¾	.06	.06	.06¼
56-58 450 endpoint	.06	.06⅛	.06	.06⅛	.06⅛	.06¼
58-60 437 endpoint (U. S. Motor)	.06⅛	.06½	.06⅜	.06½	.06	.06½
60-62 400 endpoint	.06¼	.06½	.06⅜	.06½	.06½	.06¾
64-66 375 endpoint	.07	.07¼	.07	.07¼	.07	.07¼
68-70 360 endpoint	.07¼	.07½	.07¼	.07½	.07¼	.07½
64-66 437 endpoint (blend)	.06¼	.06½	.06¼	.06½	.06¼	.06½
GULF COAST (Export)—						
58-60 U. S. Motor	.08		.08		.08	
60-62 400 endpoint	.09		.09		.09	
61-63 390 endpoint	.09¼		.09¼		.09¼	
64-66 375 endpoint	.09½		.09½		.09½	

*Louisiana, Arkansas, Mississippi and East Texas delivery. †For local consumption.

NATURAL GASOLINE

OKLAHOMA (Group 3)—	July 8		July 1		June 24	
Grade A. 72-79.9. 375 e.p., rec. 90%	.04½	.04¾	.05¼		.05¼	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.04¼	.04½	.05		.05¼	
Grade B, 76-83.9, 375 e.p., rec. 85%	.04¼		.04½	.04¾	.05¼	
Grade BB, 84-92, 375 e.p., rec. 85%	.04	.04¼	.04½	.04¾	.05¼	
Grade C, 80-92, 375 e.p., rec. 78%	.04	.04¼	.04½		.05¼	
NORTH TEXAS—						
Grade A. 72-79.9. 375 e.p., rec. 90%	.04½	.04¾	.05¼		.05¼	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.04¼	.04½	.05		.05¼	
Grade B, 76-83.9, 375 e.p., rec. 85%	.04¼		.04½	.04¾	.05¼	
Grade BB, 84-92, 375 e.p., rec. 85%	.04	.04¼	.04½	.04¾	.05¼	
Grade C. 80-92. 375 e.p., rec. 78%	.04	.04¼	.04½		.05¼	
NORTH LOUISIANA—						
Grade AA, 80-87, 375 e.p., rec. 90%	.04¾	.05	.05½	.05¾	.05¾	.06
Grade BB, 84-92, 375 e.p., rec. 85%	.04½	.04¾	.04¾	.05	.05½	
Grade C, 80-92, 375 e.p., rec. 78%	.04½		.04¾	.05	.05¼	.05½
CALIFORNIA—						
75-78 375-390 endpoint	.06¼	.06¾	.06¾	.07¼	.06¾	.07¼
CHICAGO DISTRICT (Based on Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.04¾		.05¼		.05½	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.04¼		.05		.05¼	.05½
Grade BB, 84-92, 375 e.p., rec. 85%	.04¼		.04½		.05¼	

BURNING OIL

OKLAHOMA (Group 3)—	July 8		July 1		June 24	
41-43 water white kerosene	.03¼	.03¾	.03⅝	.04	.03¾	.04
42-44 water white kerosene	.03½	.04	.04	.04¼	.04¼	.04½
NORTH TEXAS—						
41-43 water white kerosene	.03¼	.03½	.03½	.03¾	.03½	.04
40-41 water white kerosene	.03	.03¼	.03¼	.03½	.03½	.03¾
*NORTH LOUISIANA—						
41-43 water white kerosene	.04¼		.04½		.04½	.04¾
*ARKANSAS—						
41-43 water white kerosene	.04¼		.04½		.04½	.04¾
PENNSYLVANIA—						
43 Kerosene prime white	.04¼		.04⅜	.04¾	.04⅝	.05
45 Kerosene water white	.04⅝	.04¾	.04¾		.04¾	.05
46 Kerosene water white	.04¾	.05¼	.05	.05¼	.05	.05½
47 Kerosene water white	.05	.05½	.05¼	.05½	.05½	.05¾
300 Mineral Seal	.05¾	.06	.06	.06¼	.06½	
CALIFORNIA—						
38-40 water white Kero. (high burning test)	.04	.04½	.04	.04½	.04	.04½
Engine distillate, 43-44, 445 endpoint	.06	.06½	.06	.06½	.06	.06½
Engine distillate, 42-44, 480 endpoint	.05	.05½	.05	.05½	.05	.05½
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white kerosene	.03¼	.03½	.03½	.03¾	.03¾	.04
42-44 water white kerosene	.03½	.03¾	.03¾	.04	.04¼	.04½
GULF COAST (Export)—						
41-43 prime white	.06		.06		.06	
41-43 water white	.07		.07		.07	

*Louisiana, Arkansas, Mississippi and East Texas delivery.

FUEL OIL

OKLAHOMA (Group 3)—	July 8		July 1		June 24	
Below 18 Fuel Oil, per bbl.	.47½	.52½	.47½	.52½	.47½	.52½
18-22 Fuel Oil, per bbl.	.50	.55	.50	.55	.50	.55
20-22 Fuel Oil, per bbl.	.52½	.60	.55	.60	.55	.60
22-26 Fuel Oil, per bbl.	.55	.65	.57½	.65	.60	.65
26-30 Fuel Oil, per bbl.	.75	.80	.75	.80	.75	.80
28-30 Fuel Oil, per bbl.	.80	.85	.82½	.87½	.82½	.87½
32-36 Gas Oil (industrial)	.02⅛	.02¼	.02⅛	.02¼	.02⅛	.02¼
32-36 Gas Oil (straw color)	.02¼	.02½	.02¼	.02½	.02¼	.02½
36-38 Distillate	.02⅝	.02¾	.02¾	.03	.02¾	.03
38-40 Straw Distillate	.02¾	.03	.02⅞	.03	.02⅞	.03
NORTH TEXAS—						
Below 20 Fuel Oil, per bbl.	.40	.50	.45	.55	.45	.55
24-26 Fuel Oil, per bbl.	.60	.65	.60	.65	.60	.65
32-36 Gas Oil (industrial)	.02	.02⅛	.02	.02⅛	.02	.02⅛
38-40 Straw Distillate	.02¾	.03	.02¾	.03	.02¾	.03
*NORTH LOUISIANA—						
18-20 Fuel Oil, per bbl.	.70	.75	.70	.75	.70	.75
30-32 Gas Oil	.02⅜	.02¾	.02⅜	.02¾	.02⅜	.02¾
*ARKANSAS—						
33-36 Distillate	.02¾	.03	.02¾	.03	.02¾	.03
30-32 Gas Oil	.02⅝	.02¾	.02⅝	.02¾	.02⅝	.02¾
16-22 Refinery Fuel Oil, per bbl.	.65	.70	.65	.70	.65	.70
GULF COAST (South Texas)—						
Gas Oil	.03¾	.04	.03¾	.04	.03¾	.04
Bunker C Fuel (cargo lots), per bbl.	.80	.90	.80	.90	.80	.90
Bunker C Fuel (small lots)	1.05	1.10	1.05	1.10	1.05	1.10
PENNSYLVANIA—						
30-34 Fuel Oil	.03¼	.03½	.03½	.03¾	.03½	.03¾
36-40 Fuel Oil	.03½	.03¾	.03¾	.04	.03¾	.04
CALIFORNIA—						
33-36 Distillate	.02½	.03	.02½	.03	.02½	.03
26-32 Distillate	.01¾	.02	.01¾	.02	.01¾	.02
15-20 Fuel Oil, Bunker (at tidewater)	.60	.65	.60	.65	.60	.65
15-20 Fuel Oil (cargo lots), per bbl.	.55	.65	.55	.65	.55	.65
27 plus Diesel, per bbl.	.80	.90	.80	.90	.80	.90
CHICAGO DISTRICT (Based on Group 3)—						
22-26 Fuel Oil, per bbl.	.60	.65	.60	.65	.60	.65
18-22 Fuel Oil, per bbl.	.50	.55	.50	.55	.50	.55
28-30 Fuel Oil, per bbl. (zero)	.82½	.87½	.82½	.87½	.82½	.87½
32-36 Gas Oil (zero)	.02⅜	.02⅝	.02¼	.02⅜	.02¼	.02⅜
32-36 Gas Oil (industrial)	.02⅛	.02¼	.02⅛	.02¾	.02⅝	.02⅞
38-40 Straw Distillate	.02¾	.03	.02¾	.03	.02¾	.03

*Louisiana, Arkansas, Mississippi and East Texas delivery.

LUBRICATING OIL AND WAX

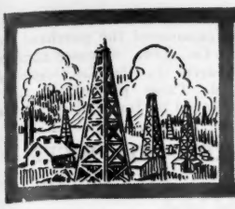
OKLAHOMA (Group 3)—	July 8		July 1		June 24	
100 vis., 2 color, 20-25 cold test	.06	.06½	.06	.06½	.06	.06½
100 vis., 3 color, 20-25 cold test	.05½	.06	.05½	.06	.05½	.06
150 vis., 3 color, 20-25 cold test	.08	.08½	.08	.08½	.08	.08½
150 vis., 4 color, 20-25 cold test	.07½	.08	.07½	.08	.07½	.08
180 vis., 3 color, 23-28 cold test	.09½	.10	.09½	.10	.09½	.10
180 vis., 4 color, 23-28 cold test	.09	.09½	.09	.09½	.09	.09½
180 vis., 5 color, 23-28 cold test	.08½	.09	.08½	.09	.08½	.09
200 vis., 3 color, 23-28 cold test	.11	.11½	.11	.11½	.11	.11½
200 vis., 4 color, 23-28 cold test	.10½	.11	.10½	.11	.10½	.11
200 vis., 5 color, 23-28 cold test	.10	.10½	.10	.10½	.10	.10½
240 vis., 5 color, 25-30 cold test	.14½	.15	.14½	.15	.14½	.15
240 vis., 4 color, 25-30 cold test	.13½	.14	.13½	.14	.13½	.14
240 vis., 5 color, 25-30 cold test	.12½	.13	.12½	.13	.12½	.13
280 vis., 3 color, 25-30 cold test	.16½	.17	.16½	.17	.16½	.17
280 vis., 4 color, 25-30 cold test	.15½	.16	.15½	.16	.15½	.16
280 vis., 5 color, 25-30 cold test	.14½	.15	.14½	.15	.14½	.15
Cylinder Stocks:						
600, steam refined, light green	.08	.11	.08	.11	.08	.11
600, steam refined, dark green	.06	.08	.06	.08	.06	.08
190-200 vis., D color, Bright Stock	.37		.37		.37	
150-160 vis., D color, Bright Stock	.30	.32	.32		.32	
*150-160 vis., D color, Bright Stock	.28	.30	.30	.32	.30	.32
150-160 vis., E color, Bright Stock	.26	.28	.28	.30	.28	.30
Waxes:						
124-126 White Crude Scale Wax	.02	.02⅛	.02	.02⅛	.02	.02¼

*High cold test. All bright stock prices are for domestic movement.

PENNSYLVANIA—						
34 Neutral	.05¾	.06½	.06	.06½	.06½	.06¾
34 Sundebloom	.05¾	.06	.06	.06½	.07¼	
36 Miners'Neutral	.06	.06¼	.06¼	.06½	.06¾	.07
150, 3 color	.13	.14	.13	.14	.13½	.14
180, 3 color	.17	.18	.18	.19	.19	.20
200, 3 color	.20	.23	.21	.23	.22½	.23
220, 3 color	.23	.24	.23	.25	.25	.26
600, steam refined	.10	.11	.12	.13	.15	.16
635, steam refined	.14	.17	.15	.17	.20	.21
650, steam refined	.17	.19	.18	.20	.22	.24
600, Pennsylvania Flash	.21		.22		.22	.25
630, Pennsylvania Flash	.28	.29	.28½	.30	.30	
600, E filtered	½	.18	.19	.20	.22	.24
600, D filtered	.20	.23	.23	.26	.27	.28
Pennsylvania Bright Stocks	.25	.27	.26	.28	.30	.32
*122-124 White Crude Scale Wax	.02¼		.02¼		.02⅜	
124-126 White Crude Scale Wax	.02¼		.02¼		.02¼	

*At New York.

GULF COAST (South Texas)—						
100 vis., 2-2½ color, pale oil	.06½	.06¾	.06½	.06¾	.06½	.06¾
200 vis., 3 color, pale oil	.09½		.09½		.09½	
300 vis., 3 color, pale oil	.10¾		.10¾		.10¾	
500 vis., 3½ color, pale oil	.12	.12¾	.12	.12¾	.12	.12¾
750 vis., 3½ color, pale oil	.13½		.13½		.13½	
1,200 vis., 3½ color, pale oil	.16		.16		.16	
2,000 vis., 6 plus color, red oil	.17		.17		.17	
200 vis., 5-6 color, red oil	.08¾	.09	.08¾	.09	.08¾	.09
300 vis., 5-6 color, red oil	.10	.10¼	.10	.10¼	.10	.10¼
500 vis., 5-6 color, red oil	.11¼		.11¼		.11¼	
750 vis., 5-6 color, red oil	.12¾	.13	.12¾	.13	.12¾	.13



REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

1,200 vis., 5-6 color, red oil	.15		.15		.15	
2,000 vis, 4 color, pale oil	.17		.17		.17	
200 vis., 2½ color, filtered oil	.11	.12	.11	.12	.11	.12
300 vis., 2½ color, filtered oil	.12	.13	.12	.13	.12	.13
CALIFORNIA—						
130 vis., 2½-3 color	.10¼	.10½	.10¼	.10½	.10¼	.10½
200 vis., 2½-3 color	.11½	.11¾	.11½	.11¾	.11½	.11¾
300 vis., 3-3½ color	.13	.13½	.13	.13½	.13	.13½
350 vis., 3½-4 color	.13½	.13¾	.13½	.13¾	.13½	.13¾
400 vis., 3½-4 color	.15	.15½	.15	.15½	.15	.15½
Red Neutral:						
200 vis., 4½-5 color	.11	.11¼	.11	.11¼	.11	.11¼
300 vis., 5-6 color	.12	.12¼	.12	.12¼	.12	.12¼
400 vis., 5-6 color	.13¼	.14	.13¼	.14	.13¼	.14
500 vis., 4½-5 color	.15¼	.15½	.15¼	.15½	.15¼	.15½
500 vis., 5-6½ color	.15	.15¼	.15	.15¼	.15	.15¼
600 vis., 6½ plus color	.16	.16¼	.16	.16¼	.16	.16¼

Note—Bright Stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

	July 8		July 1		June 24	
Gasoline, U. S. Motor, 58-60, 437 e.p.	.09	.10	.09	.10	.09	.10
Kerosene, water white, 41-43	.07	.07¼	.07	.07¼	.07	.07¼
*Fuel Oil, Bunker "C," 41-43	1.15		1.15		1.15	
Fuel Oil, Diesel, 28-30, per bbl.	2.00		2.00		2.00	
Gas Oil, 32-36 gravity	.04¾	.05¼	.04¾	.05¼	.04¾	.05¼
25 pale Paraffin Oil, tank car	.10½		.10½		.10½	
28 pale Paraffin Oil, tank car	.07½		.07½		.07½	
280 red Paraffin Oil, tank car	.12½		.12½		.12½	
250 red Paraffin Oil, tank car	.11½		.11½		.11½	
225 red Paraffin Oil, tank car	.10		.10		.10	
200 red Paraffin Oil, tank car	.09¼		.09¼		.09¼	
Refined Wax:						
120-122 a.m.p., per lb.	.02⅞		.02⅞		.02⅞	
125-127 a.m.p., per lb.	.03¼		.03¼		.03⅜	
130-132 a.m.p., per lb.	.03¾		.03¾		.03¾	
133-135 a.m.p., per lb.	.04½		.04½		.04½	
135-137 a.m.p., per lb.	.04⅝		.04⅝		.04⅞	
Petrolatum in barrels, in carload lots, per pound:						
Dark green	.01¾		.01¾		.01¾	
Amber	.03¼		.03¼		.03¼	
Extra Amber	.03⅜		.03⅜		.03⅜	
Cream	.06⅛		.06⅛		.06⅛	
Lily White	.06¼		.06¼		.06¼	
Snow White	.08⅛		.08⅛		.08⅛	

*Lighterage 5.0 cents a barrel extra.

NEW YORK (BAYONNE) EXPORT PRICES

	July 8	July 1	June 24
Kerosene, prime white	.07¾	.07¾	.07¾
Kerosene, water white	.09	.09	.09
600, steam refined cylinder stocks, in bbls.	.21	.22	.25
635, steam refined	.23	.24	.27
650, steam refined	.27	.28	.31
600, Pennsylvania Flash	.33	.33	.35
630, Pennsylvania Flash	.36	.36	.38
600, Warren E	.31	.32	.33
600, Oil City E	.30	.31	.32
Light 140-150 Bright Stocks	.35	.37	.41
Dark 140-150 Bright Stocks	.33	.35	.39

LOS ANGELES EXPORT PRICES

	July 8		July 1		June 24	
Kerosene, water white	.03¾	.04½	.03¾	.04½	.03¾	.04½
*U. S. Motor Gasoline, 53-55, 437 e.p.	.06½	.06¾	.06½	.06¾	.06½	.06¾

*Prices on coastwise shipments.

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

Oklahoma City—Same as other Mid-Continent price schedule except Empire Pipe Line Co. posted all oil 40 gravity and above at $1.43 on April 10.
Corsicana heavy (April 10, 1930).....$ .80
Other fields.....See gravity table

*Posted by Magnolia Petroleum Co.

TEXAS PANHANDLE

Gray County, Wheeler County and Carson-Hutchinson Counties—See gravity table.
In Noel-McConnell district Prairie Oil & Gas Co. posted April 10, below 30 degrees, 75½ cents, with 5-cent differential upward to 34-34.9, $1.00½, and then a 3-cent differential upward to 44 and above at $1.35½.

WEST TEXAS

Iatan*.....Same as North Texas
Crane-Upton-Crockett, Pecos, Winkler, Mitchell and Ector .....See gravity table, Column 3
Howard and Glasscock.....See gravity table, Column 9
Chalk† (April 10, 1930) .....$ .75

*Includes Westbrook Field. †Posted by Humble Oil & Refining Co.

ARKANSAS-NORTH LOUISIANA

Smackover, below 24 gravity (April 11, 1930) .....$ .90
Smackover, 24 gravity and above (April 11, 1930) 1.05
Carterville, Sarepta and Cotton Valley, below 36 gravity (April 11, 1930)... .85
Bellevue (April 11, 1930) 1.15
Urania (April 11, 1930) ..... .95
East El Dorado (April 11, 1930) ..... .90
Other fields.....See gravity table

Cotton Valley crude above 36 gravity takes same gravity price schedule as shown for North Louisiana and Arkansas crude in Mid-Continent gravity price table.
Note—Smackover, Cotton Valley and Bellevue posted by Standard Oil Co. of Louisiana and Magnolia Petroleum Co.; Urania posted by Louisiana Oil Refining Corp.; East El Dorado posted by Magnolia Petroleum Co.

GULF COAST

Grade A (April 10, 1930)* $1.15
Grade B, 25 degrees and upward .....See gravity table
Jennings, La. (April 10, 1930)†..... 1.10
Refugio (light) .....Same as Grade B
Refugio (heavy) (April 10, 1930)‖ .... .85
Sorrento (April 10, 1930)‡ 1.10
Markham (April 10, 1930)§..... .85
High Island (April 10, 1930)¶..... .95

*Humble Oil & Refining Co. †Gulf Pipe Line Co. ‡Sun Pipe Line Co. §The Texas Pipe Line Co. ¶Posted by Gulf Pipe Line Co. ‖Humble Oil & Refining Co. and Gulf Coast Pipe Line Co.

ROCKY MOUNTAIN STATES
Ohio Oil Co.-Midwest Refining Co.
(Effective April 11, 1930)

Hex (Feb. 15, 1930):
33 gravity and above .....$ .87
Under 33 gravity ..... .65
Dutton Creek (Feb. 15, 1930) 1.25
Rock Creek, Wyo. 1.35
Salt Creek.....See gravity table
Big Muddy 1.38
Grass Creek, heavy (July 27, 1928) .... .90

(Continued on Page 144)

CRUDE OIL GRAVITY TABLE

Gravity—	Okla.-Kans. 1	N. C. Texas, No. La., Arkansas Crane, Upton, Ector, Crockett, Winkler, Pecos, Mitchell (West Texas); Lea, N. Mex. 2	Wheeler County (Texas Panhandle) 3	Gray County (Texas Panhandle) 4	Carson and Hutchinson (Texas Panhandle) 5	Salt Creek, Wyo. 6	Stephens, Ark. 7	Howard-Glasscock (West Texas) 8	Grade B Gulf Coast and Refugio, Texas 9	Grade A Gulf Coast and Refugio, Texas 10
Below 25	.75	.73	.65	....	....	....	....	....	.65	1.00
25 to 25.9	.80	.77	.68	....	....	....	....	....	.68	1.03
26 to 26.9	.85	.82	.71	....	....	....	....	....	.71	1.06
27 to 27.9	.90	.87	.74	....	....	....	....	.76	.74	1.09
28 to 28.9	.95	.92	.77	....	.75½	....	....	.81	.78	1.12
29 to 29.9	1.00	.97	.80	.75½	.80½	....	1.00	.86	.78	1.15
30 to 30.9	1.05	1.02	.83	.80½	.85½	....	1.05	.91	.80	1.18
31 to 31.9	1.10	1.07	.86	.85½	.90½	.77½	1.10	.96	.82	1.21
32 to 32.9	1.15	1.12	.89	.90½	.95½	.82½	1.15	1.01	.84	1.24
33 to 33.9	1.18½	1.17	.92	.95½	1.00½	.87½	1.18½	....	.86	1.27
34 to 34.9	1.22	1.22	.95	1.00½	1.05½	.92½	1.22	....	.88	1.30
35 to 35.9	1.25½	1.25½	.98	1.04	1.09	.96	1.25½	....	.90	1.33
36 to 36.9	1.29	1.29	1.01	1.07½	1.12½	.99½	1.29	....	.92	1.36
37 to 37.9	1.32½	1.32½	....	1.11	1.16	1.03	1.32½	....	....	1.39
38 to 38.9	1.36	1.36	....	1.14½	1.19½	1.06½	....	....	....	1.42
39 to 39.9	1.39½	1.39½	....	1.18	1.23	1.10	....	....	....	1.44
40 to 40.9	1.43	1.43	....	1.21½	1.26½	1.13½	....	....	....	1.48
41 to 41.9	1.46½	1.46½	....	1.25	1.30	1.17	....	....	....	1.48
42 to 42.9	1.50	1.50	....	1.28½	1.33½	1.20½	....	....	....	1.50
43 to 43.9	1.53½	1.53½	....	1.32	1.37	1.24	....	....	....	1.53
44 and above	1.57	1.57	....	1.35½	1.40½	1.27½	....	....	....	1.54

Column 1, Note—Above prices posted April 10, 1930, by Carter Oil Co. (beginning at 25 degrees and below), and by the Prairie Oil & Gas Co. and other purchasers beginning at 24 degrees and below, the Magnolia Petroleum alone excepted. The Magnolia on April 10 posted the following prices: Below 26 gravity, 70 cents 26-26.9, 76 cents; 27-27.9, 82 cents; 28-28.9, 88 cents; 29-29.9, 95 cents; 30-30.9, $1.02. From 31 up and including 44 degrees and above Magnolia followed Carter price schedule, but made its whole schedule apply to its gravity purchases in Kansas, Oklahoma and North Central Texas alike.

Column 2—Humble Oil & Refining Co. posted above prices April 10, 1930, and was followed by all other companies in Texas except Magnolia which posted a different price schedule than Humble up to 32.9 degrees (see note in paragraph just above). The Texas Company posted North Louisiana and Arkansas on April 10, and Standard of Louisiana posted on April 11 followed by other companies, but Magnolia's price schedule begins with below 28 gravity at 87 cents. North Central Texas includes North Texas, Ranger, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Nocona, Moran, and Corsicana light, Arkansas and Louisiana pools include Caddo, Bull Bayou, Crichton, Cotton Valley, above 36 gravity, DeSoto, Haynesville, Homer, El Dorado and Rainbow.

Column 3—Posted by Humble Oil & Refining Co. April 10, 1930, and Magnolia Petroleum Co. April 10, 1930.

Column 4, 5 and 6—Humble Oil & Refining Co., Prairie Oil & Gas Co., Magnolia Petroleum Co., April 10, 1930.

Column 7—Mid-West Refining Co., April 11. All crude over 37 gravity $1.32½.

Column 8—Louisiana Oil & Refining Co., April 11.

Column 10—Humble Oil & Refining Co., April 10. Magnolia Petroleum Co. posted below 25 gravity 65 cents with 3-cent differential upward to and including 36 and above, which was posted at $1.01.

CALIFORNIA CRUDE OIL PRICES

Standard Oil Co.-Union Oil Co. (Effective March 11, 1930)

Gravity—	Seal Beach, Salt Lake, Newport, Summerland, Lawndale, Los Angeles, Fullerton, Richfield, Torrance, Olinda-Brea, Alamitos Heights, Huntington Beach, Signal Hill, Inglewood 1	Whittier, La Habra, Coyote Hills 2	Midway-Sunset, Elk Hills, Lost Hills, Belridge, Buena Vista Hills 3	Montebello 4	Santa Fe Springs (June 14, 1930) 5	Santa Maria, Coalinga 6	Wheeler Ridge, Fruitvale 7	Orcutt, Ventura, Rincon 8	Ventura Avenue (Nov. 8) 9	Elwood Terrace 10	Athens, Rosecrans, Dominguez 11
14 to 14.9	.70	.70	.55	.70	....	.55	.55	.55	.70	....	....
15 to 15.9	.70	.70	.55	.70	....	.55	.55	.55	.70	....	....
16 to 16.9	.70	.70	.55	.70	....	.55	.55	.65	.70	....	....
17 to 17.9	.70	.70	.55	.70	....	.55	.55	.65	.70	....	....
18 to 18.9	.76	.76	.62	.71	....	.62	.62	.65	.76	....	....
19 to 19.9	.82	.82	.70	.77	....	.70	.70	.70	.82	....	....
20 to 20.9	.88	.87	.78	.83	....	.78	.78	.78	.88	....	....
21 to 21.9	.94	.93	.86	.90	.92	.86	.86	.90	.91	....	....
22 to 22.9	1.00	.98	.94	.97	.95	.94	.94	.95	.94	....	....
23 to 23.9	1.07	....	1.02	1.05	1.01	1.02	1.02	1.02	1.00	....	....
24 to 24.9	1.14	....	1.09	1.11	1.07	1.07	1.07	1.10	1.07	....	1.14
25 to 25.9	1.21	....	1.16	1.17	1.13	1.12	1.12	1.18	1.14	....	1.19
26 to 26.9	1.28	....	1.23	1.23	1.19	1.17	1.17	1.26	1.21	....	1.24
27 to 27.9	1.35	....	1.30	1.29	1.25	1.23	1.22	....	1.28	....	1.29
28 to 28.9	1.42	....	1.35	1.35	1.31	1.27	....	....	1.35	....	1.34
29 to 29.9	1.46	....	1.41	1.38	1.37	1.31	....	....	1.39	....	1.39
30 to 30.9	1.50	....	1.47	1.41	1.43	1.35	....	....	1.43	....	1.46
31 to 31.9	1.55	....	1.53	....	1.49	1.39	....	....	1.48	....	1.51
32 to 32.9	1.60	....	1.59	....	1.55	1.43	....	....	1.53	....	1.57
33 to 33.9	1.65	....	1.65	....	1.60	1.47	....	....	1.59	....	1.64
34 to 34.9	1.70	....	....	....	1.65	1.51	....	....	1.65	1.32	1.71
35 to 35.9	1.75	....	....	....	1.70	1.55	....	....	1.71	1.39	1.78
36 to 36.9	1.80	....	....	....	1.75	....	....	....	....	1.46	1.84
37 to 37.9	1.85	....	....	....	1.80	....	....	....	....	1.53	1.90
38 to 38.9	1.90	....	....	....	1.85	....	....	....	....	1.60	1.96
39 to 39.9	....	....	....	....	1.90	....	....	....	....	1.66	2.02
40 to 40.9	....	....	....	....	....	....	....	....	....	1.72	2.08
41 to 41.9	....	....	....	....	....	....	....	....	....	1.78	2.14
42 to 42.9	....	....	....	....	....	....	....	....	....	1.84	2.20

Kern River, Newhall-McKittrick, Mount Poso and Round Mountain, 11 to 13.9 gravity, 50 cents; 14 gravity and above, 55 cents, effective March 11. On March 11, the Union Co. posted Midway-Sunset, Elk Hills, Buena Vista, Lost Hills and Coalinga crude as follows: 11 to 13.9 gravity at 50 cents.

Column 1——Signal Hill, Seal Beach, Huntington Beach and Alamitos Heights crude, 14 to 32.9 gravity, inclusive; Richfield, Olinda-Brea and Fullerton, 14 to 30.9 gravity; Torrance and Inglewood, 14 to 28.9 gravity.

Column 2—Whittier crude, 14 to 22.9 gravity; Coyote Hills, 14 to 30.9 gravity.

Column 3—Kern River, Newhall and McKittrick, 11 to 13.9 gravity; Midway-Sunset, Buena Vista and Elk Hills, 11 to 33.9 gravity; Lost Hills, 11 to 34.9 gravity; oil below 14 gravity posted at 50 cents.

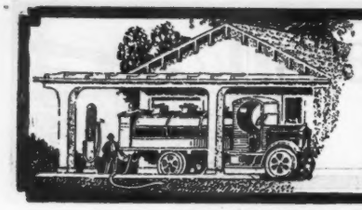
Column 5—Price change posted by Standard of California June 14.

Column 6—Oil below 14 gravity posted at 45 cents.

Columns 8 and 9—Posted by Union Oil Co. only.

Column 10—Standard posted price f.o.b. tanker.

Kettleman Hills, 55 gravity and above, $1.65 (posted by Standard Oil Co. of California).



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns, July 8.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Chicago†	18.0	19.0	3.0	13.0
Decatur, Ill.	18.2	19.2	3.0	13.1
E. St. Louis	17.4	18.4	3.0	12.2
Joliet	18.4	19.4	3.0	13.3
Peoria	18.2	19.2	3.0	13.1
Quincy	18.2	19.2	3.0	12.9
Davenport, Ia.	18.5	19.5	3.0	13.3
Des Moines	18.5	19.5	3.0	13.3
Keokuk	18.5	19.5	3.0	13.3
Sioux City	18.1	19.1	3.0	12.9
Duluth, Minn.	19.5	20.5	3.0	13.9
Mankato	19.1	20.1	3.0	13.7
Minneapolis	19.2	20.2	3.0	13.9
LaCrosse, Wis.	18.2	19.2	2.0	14.0
Milwaukee	17.1	18.1	2.0	12.9
Madison	17.3	18.3	2.0	13.1
Detroit, Mich.	18.8	19.8	3.0	14.7
Grand Rapids	18.7	19.7	3.0	14.6
Saginaw	18.9	19.9	3.0	14.8
Evansville, Ind.	19.0	20.0	4.0	14.0
Fort Wayne	19.4	20.4	4.0	14.4
Indianapolis	19.2	20.2	4.0	14.2
South Bend	19.4	20.4	4.0	14.4
Fargo, N. D.	20.9	21.9	3.0	15.9
Huron, S. D.	20.3	21.3	4.0	14.7
Sioux Falls	19.1	20.1	4.0	14.4
K. C., Mo.*	17.9	18.9	3.0	11.6
Springfield*	17.8	18.8	3.0	12.5
St. Louis*	16.9	17.9	2.5	12.3
St. Joseph	17.5	18.6	2.0	12.2
Wichita, Kans.	16.8	15.8	3.0	11.8
Bartlesville, Ok.	17.5	20.5	4.0	11.5

*State tax 2 cents; remainder city tax.
†Effective June 3, discounts on Q.D.A. in Chicago district 4 cents off service station price on purchases of 500 gallons or more per month and 5 cents on purchases of 1,000 gallons or more per month.

The following quantity discounts from the service station price are allowed on monthly sales of gasoline; 2,000 gallons or less, 2 cents; more than 2,000 and less than 6,000 gallons, 2¼ cents; more than 6,000 gallons, 3 cents; 75,000 gallons or more, 4½ cents. Discounts are allowed each month and they are not cumulative. Delivery tickets showing date and quantity delivered must be sent to the seller before the tenth of the month to secure the discount on the previous month's purchases.

NAPHTHA

	Tank wagon	Tank car
Oleum spirits	14.7	10.0
V. M. & P. naphtha	16.7	12.0
Cleaner's naphtha	17.0	14.9
Stanisol	17.0	15.4

Tank wagon prices f.o.b. Chicago; tank car prices f.o.b. Whiting.

STANOLIND FURNACE OIL IN CHICAGO

Less than 100 gallons	9.0
100 to 349 gallons	8.0
350 gallons or more	7.5

Note—Outside Chicago furnace oil discount of 1 cent per gallon is given on deliveries of 100 to 349 gallons and 1½ cents on deliveries of 350 gallons or more.

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Dallas, Tex.	14.0	18.0	4.0	12.0
Fort Worth	14.0	17.0	4.0	11.0
Houston	15.0	19.0	4.0	11.0
San Antonio	14.0	18.0	4.0	11.0
El Paso	16.0	20.0	4.0	13.0
Texarkana	14.0	15.0	4.0	12.0
Muskogee*	16.0	19.0	4.0	9.0
Okla. City*	15.0	18.0	4.0	10.0
Tulsa*	16.0	20.0	4.0	10.0
Ft. Smith, Ark.	17.0	18.0	5.0	12.0
Little Rock	18.0	19.0	5.0	13.0

*Gasoline tank wagon price to dealers 2 cents under posted tank wagon.

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Denver, Colo.	16.0	19.0	4.0	15.5
Pueblo	18.0	20.0	4.0	15.5
Grand Junction	23.0	26.0	4.0	19.0
Casper, Wyo.	19.0	22.0	4.0	14.0
Cheyenne	20.5	23.5	4.0	15.5
Butte, Mont.	24.5	27.5	5.0	20.0
Helena	24.5	27.5	5.0	20.0
Salt Lake, Utah	20.0	23.0	3.5	17.0
Aubu'que, N. M.	16.0	20.0	5.0	15.0
Boise, Idaho	23.5	24.5	5.0	19.0
Twin Falls	23.5	27.5	5.0	19.0

PENNSYLVANIA—DELAWARE AND PART NEW ENGLAND

The Atlantic Refining Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Pittsburgh, Pa.	16.0	*22.0	...	13.0
Philadelphia	16.0	*22.0	...	13.0
Scranton	16.0	*22.0	...	13.0
Allentown	16.0	*22.0	...	13.0
Altoona	16.0	*22.0	...	13.0
Erie	15.0	*19.0	...	13.0
Dover, Del.	19.0	21.0	3.0	13.0
Wilmington	19.0	21.0	3.0	13.0
Springf'd, Mass.	17.5	19.5	2.0	12.5
Worcester	17.3	19.3	2.0	12.3
Boston	16.5	18.5	2.0	11.5
Providence, R.I.	16.7	18.7	2.0	11.7
Hartford, Conn.	17.5	19.5	3.0	12.5
New Haven	17.6	19.6	2.0	12.6

*Includes tax of 4 cents. Pennsylvania tax is collected by the dealer and paid by him direct to the State. The Atlantic Refining Co. recognizes a 2-cent per gallon discount on gasoline from its posted tank wagon markets on sales to dealers for purposes of resale. The Atlantic Refining Co. also recognizes a maximum discount of 2 cents per gallon on gasoline to commercial accounts under contract for one year.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Albany, N. Y.	17.6	19.6	2.0	15.6
New York*	16.3	18.3	2.0	14.3
Buffalo	17.8	19.8	2.0	14.8
Rochester	18.0	20.0	2.0	14.0
Syracuse	18.8	20.8	2.0	14.8
Boston, Mass.	16.5	18.5	2.0	13.5
Augusta, Me.	19.8	21.8	4.0	14.8
Manch't'r, N. H.	19.4	21.4	4.0	14.0
Burlington, Vt.	19.6	21.6	4.0	15.2

*Prices in steel barrels.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlanta, Ga.	21.0	23.0	6.0	15.5
Augusta	20.0	22.0	6.0	15.5
Macon	22.0	24.0	6.0	14.0
Savannah	21.0	23.0	6.0	14.0
Birm'ham, Ala.	20.0	22.0	5.0	14.5
Mobile	18.0	18.0	4.0	13.5
Montgomery	21.0	23.0	4.0	15.0
Clarks'le, Miss.	19.0	21.0	5.0	12.5
Jackson	20.0	22.0	5.0	13.0
Natchez	19.5	21.5	5.0	13.0
Gulfport	21.0	23.5	5.0	13.0
Vicksburg	19.5	21.5	5.0	13.0
Jack'ville, Fla.	20.0	21.0	6.0	14.0
Miami	22.0	24.0	6.0	14.0
Pensacola	19.0	19.0	6.0	13.5
Tampa	21.0	23.0	5.0	13.0
Lexington, Ky.	19.0	20.0	5.0	14.5
Covington	21.0	22.0	5.0	14.5
Louisville	18.0	20.0	5.0	13.0
Ashland	19.0	21.0	5.0	15.0
Catlettsburg	20.0	21.0	5.0	15.0

In addition to the state tax of 4 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fourth cent on gasoline. To Pensacola, Birmingham and Mobile state taxes add 1-cent city levy. To Gulfport state tax add privilege tax of 2 cents.

Effective April 2, price to dealers 2 cents under posted tank wagon price.

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlantic City	16.5	18.5	2.0	13.5
Newark, N. J.	15.5	17.5	2.0	12.5
Annapolis, Md.	18.0	20.0	4.0	13.0
Baltimore	17.2	19.2	4.0	10.5
Cumberland	19.0	21.0	4.0	14.0
Washington	15.7	17.7	2.0	12.7
Danville, Va.	19.8	21.8	5.0	13.8
Norfolk	18.3	20.3	5.0	11.0
Petersburg	19.3	21.3	5.0	13.3
Roanoke	20.0	20.0	5.0	14.0
Richmond	18.7	20.7	5.0	12.7
Charles'n, W.Va.	18.5	20.5	4.0	12.5
Keyser	19.1	21.1	4.0	14.1
Parkersburg	17.2	19.2	4.0	11.2
Wheeling	18.4	20.4	4.0	12.4
Charlotte, N. C.	20.3	22.3	5.0	14.3
Hickory	20.6	22.6	5.0	14.6
Mt. Airy	20.5	22.5	5.0	14.5
Salisbury	20.7	22.7	5.0	14.7
Charleston, S.C.	19.3	21.3	6.0	13.3
Columbia	21.2	23.2	6.0	14.2

A 2-cent per gallon discount off the gasoline tank wagon price is offered to dealers.

PACIFIC COAST TERRITORY

Standard Oil Co. (California)

	Gasoline			Kero.
	Net tank wagon	Wholesale tank wagon	Incl'ds tax of	tank wagon
San Francisco	13.0	19.0	3.0	15.5
Los Angeles	12.5	18.5	3.0	15.5
Reno, Nev.	18.0	24.0	4.0	19.0
Portland, Ore.	14 5	20.5	4.0	16.5
Seattle, Wash.	13.5	19.5	3.0	16.5
Tacoma	13.5	19.5	3.0	16.5
Spokane	18.5	21.5	3.0	20.5
Phoenix, Ariz.	17.0	18.0	4.0	20.0

Above prices are at company's plant or depots as company does not operate stations. A 6-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where discount is 1 cent.

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Omaha	19.25	21.25	4.0	13.25
McCook	29.75	22.75	4.0	14.75
Norfolk	19.75	21.75	4.0	13.75
N. Platte	20.75	22.75	4.0	14.50
Scottsbluff	20.75	22.75	4.0	14.25

OHIO

Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Ohio points*	20.0	21.0	4.0	†14.0

*Dealers and commercial accounts 2 cents under tank wagon.
†Service station price 16 cents.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
N. Orleans, La.*	14.5	14.5	5.0	12.0
Baton Rouge	16.0	16.0	4.0	14.0
Alexandria†	18.0	18.0	5.0	14.0
Lafayette*	18.0	18.0	5.0	14.0
Lake Charles*	16.0	16.0	5.0	14.0
Shreveport	14.0	18.0	4.0	14.0
Knovx'le, Tenn.	20.0	22.0	5.0	16.0
Memphis	18.0	20.0	5.0	12.5
Chattanooga	20.0	22.0	5.0	16.0
Nashville	19.0	21.0	5.0	16.0
Bristol	20.0	22.0	5.0	14.0
Lt. Rock, Ark.	17.0	17.0	5.0	13.0

*Includes city tax of 1 cent. Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.
†Gasoline price at Alexandria includes 1-cent tax in Parish of Rapides.

TANK WAGON CHANGES

Standard Oil Co. of New Jersey reduced gasoline service station price 1 cent at Roanoke, Va., June 25. Same company reduced kerosene tank wagon price 1 cent at Norfolk, Va., June 30.

Standard Oil Co. of Louisiana advanced gasoline tank wagon and service station prices 1 cent at Alexandria, La., due to gasoline tax of 1 cent in parish of Rapides effective July 1.

Standard Oil Co. of California reduced gasoline tank wagon price 2 cents at Spokane, Wash., July 1.

Standard Oil Co. of Kentucky reduced gasoline tank wagon and service station prices 2 cents at Louisville, Ky., effective July 3. Same company reduced gasoline tank wagon price 1 cent and service station price 2 cents at Jacksonville, Fla., July 2. Same company reduced gasoline service station price 2 cents at Pensacola, Fla., effective July 3.

CRUDE OIL PRICE CHANGES

Imperial Oil Co., Ltd., has advanced Turner Valley crude 25 cents per barrel to $3.69 for sweet crude and $3.45 for discolored crude, effective July 7. Imperial also announced the purchase from Benton Oil Co., Ltd., of leases aggregating 2,780 acres in the Lethbridge Alberta Field. These properties will be jointly developed by Imperial and Benton.

CRUDE OIL PRICES

(Continued from Page 143)

Grass Creek, light	1.55
Mule Creek (May 31, 1929)	1.20
Elk Basin	1.55
Lance Creek	1.63
Poison Spider (March 14, 1927)	1.00
Notches (March 14, 1927)	.65
Rex Lake (February 22)	1.10
Osage	1.63
Lost Soldier (contract, May 22)	1.05
Hamilton Dome (March 14, 1927)	.85
Greybull (February 15, 1930)	1.45
Four Bear (May 21, 1929)	.85
Cat Creek	1.55
Fondera (Montana) (Feb. 15, 1930)	1.80
Sunburst (Montana) (Feb. 15, 1930)	1.65
Torchlight (May 21, 1929)	1.55
Hogback (Feb. 15, 1930)	1.40
Artesia (New Mexico)	1.05
Lea County	See gravity table

Note—Salt Creek, Osage, Cat Creek, Greybull and Hogback posted by Midwest Refining Co., and the remainder by the Ohio Oil Co. Both companies posted Grass Creek light and Elk Basin.

SOUTH CENTRAL AND SOUTHWEST TEXAS

Darst Creek (April 10, 1930)*	$1.15
Luling (April 10, 1930)	.85
Mirando (April 10, 1930)†	.85
Pettus (April 10, 1930)‡	1.40
Salt Flat (April 10, 1930)‖	1.15
Thrall‡	
Lytton Springs (Lockhart) See gravity table	
Somerset (April 10, 1930):	
Below 33 gravity	$1.15
33 to 33.9 gravity	1.17
34 to 34.9 gravity	1.19
35 to 35.9 gravity	1.21
36 to 36.9 gravity	1.23
37 to 37.9 gravity	1.25
38 gravity and above	1.27

*Posted by Humble Oil & Refining Co. and Magnolia Petroleum Co. †Magnolia Petroleum Co., Humble Oil & Refining Co., Crown Central Pipe Line Co. ‡Thrall prices same as North Central Texas less 19½ cents per cwt. freight. ‖Humble Oil & Refining Co.

EASTERN STATES

Joseph Seep Purchasing Agency
(Effective June 17, 1930)

Seep Purchasing Agency withdrew from Bradford and Allegany Fields as a purchaser on May 16.

Penna Grade Oil in National Transit Lines (Pennsylvania)	$2.20
Penna Grade Oil in Southwest Pennsylvania Lines (Pennsylvania)	2.15
Penna Grade Oil in Eureka Pipe Line Lines (West Virginia)	2.05
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	1.90
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia) (May 22, 1929)	1.75
Corning 35-cent Grade Oil in Buckeye Pipe Line Co.'s Lines (Feb. 17, 1930)	1.75
Somerset Oil in Eureka Pipe Line Lines (Kentucky) (April 11, 1930)	1.31
Somerset Oil in Cumberland Pipe Line Lines (Kentucky) (April 11, 1930)	1.47
Ragland Grade Oil in Cumberland Pipe Line Lines (Kentucky) (Jan. 29)	.60
Wayne District Oil in Cumberland Pipe Lines (April 11, 1930)	1.34

Tide Water Pipe Co.

Bradford district (June 17)	$2.25
Allegany district (June 17)	2.25

Pure Oil Co.

Cabin Creek, W. Va. (June 17)	$2.30
Kelly Creek, W. Va. (June 17)	2.15
Bradford Hollow (June 17)	2.15

MIDDLE WESTERN STATES

Ohio Oil Co.
(Effective April 11, 1930)

Lima (June 26, 1930)	$1.55
Wooster (June 26, 1930)	1.70
Illinois	1.45
Indiana (June 26, 1930)	1.33
Princeton	1.45
Plymouth	1.33
Waterloo (Nov. 17, 1926)	1.35
Western Kentucky	1.55
Midland, Mich.* (June 5)	1.55
Dundee, Mich. (April 16)‖	
Same as Mid-Continent gravity scale	
Upper and Lower Traverse sands, Mich. (April 16)‖	
Same as Mid-Continent gravity scale	
Saginaw, Mich. (April 11)†	
Same as Mid-Continent gravity scale	
Cumberland, Clay, Barren, Clinton and Monroe Counties, Kentucky (March 15)‡	1.80
Oil in line in Stoll Oil Refining Co. in Oil City, Ky. (April 18)‖	1.45
Oil Springs (Canada) (June 28, 1930)¶	2.02
Petrolia (Canada) (June 28, 1930)¶	1.95

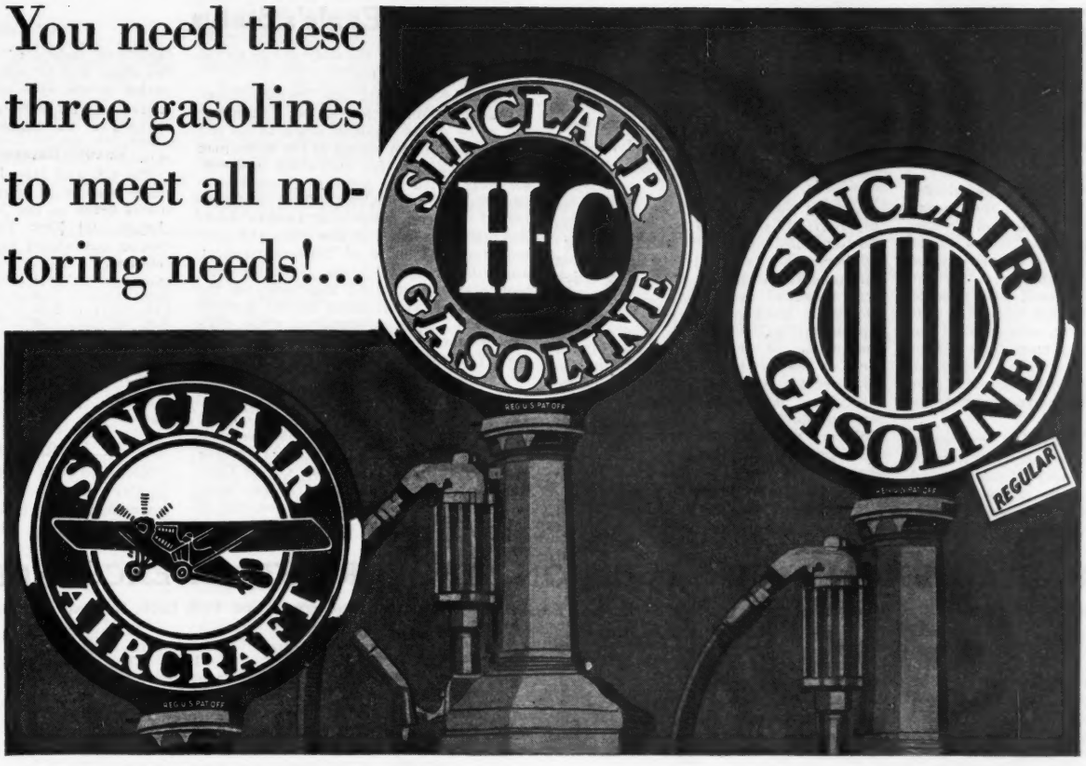
*Posted by Pure Co. †Posted by Sun Oil Co. ‡Posted by Paragon Development Co. ‖Posted by Stoll Oil Refining Co. ¶Posted by Imperial Oil Co., Ltd. ‖Posted by Standard of Indiana for boat shipment. Local Refiners posted Mid-Continent prices on April 11.

MEXICAN CRUDE

Panuco*	$ .60

*F.o.b. ship, based on May transactions.

You need these three gasolines to meet all motoring needs!...



Sell SINCLAIR THREE-GAS SERVICE!

The easiest way to increase your gallonage is to offer every motorist the opportunity to select the RIGHT gasoline for his own engine and his own driving habits.

Let him choose from THREE DIFFERENT KINDS, through Sinclair Three-Gas Service.

If he wants his engine to get away like a rocket, to be flashy in traffic and brilliant on the road, then recommend Sinclair Aircraft Gasoline . . . the *Ace* of high test gasolines. Sinclair Aircraft is the Ace of high test gasolines because it is specially manufactured at Sinclair Refineries, meeting the requirements of the Federal Specifications Board for Aviation Gasoline—domestic grade—and gives sustained power. Due to its careful fractionation it is free from dissolved gases which cause gas locks, uneven distribution, galloping and engine balk.

Or, if he wants the remarkable high compression gasoline that stops knocks in his engine and takes the hills in high . . . then his gas is H-C. It's all gasoline, nothing added.

Or, if he prefers to pay three cents less per gallon—here's Sinclair Regular Gasoline—full of eager power—full of economy and mileage. The quality gasoline at a popular price!

Try selling Sinclair Three-Gas Service—you'll sell more satisfaction and get more volume.

SINCLAIR REFINING COMPANY, INC., 45 Nassau Street, New York—*Atlanta, Chicago, Houston, Kansas City*

Transcontinental Stockholders Vote

Notice of Special Meeting Sent to Stockholders Regarding Sale to Ohio Oil Co. Mexican Eagle's Status

NEW YORK, July 8.—Transcontinental Oil Co. has called a special stockholders' meeting for August 14 to vote on the sale of the company's assets to the Ohio Oil Co., in exchange for common stock of the latter company.

Outlining the Ohio deal to stockholders, the Transcontinental notice of the special meeting says: "Ohio Oil Co. and its subsidiaries have a net production of crude oil in the United States of more than 50,000 bbls. a day, a substantial portion of which is old and settled, with a large additional volume of flush potential production shut in under proration. They own or hold under lease more than 1,000,000 acres of land in the United States, of which approximately 300,000 acres is producing, and extensive undeveloped acreage in Mexico.

"They also control large gas reserves in the United States, some of which are in production. In the Rocky Mountain and northwestern areas their gas production has been and is being capitalized in public utility corporations. At Robinson, Ill., they own and operate a 10,000-bbl. refinery. They market gasoline and other petroleum products in several central western states. These refining and marketing operations are conducted by Lincoln Oil Refining Co., a wholly owned subsidiary.

"Among the proven but undeveloped or only partially developed holdings of Ohio and its subsidiaries are the following: Oklahoma City, where tracts aggregating 290 acres are held, on a portion of which large potential production has been developed; a block east of Oklahoma City approximating 10,000 acres; tracts at Cement, Okla., of about 3,700 acres; and a block of 800 acres at Venice, Calif. On the three last mentioned properties there have been developed in recent months deep production in good volume. The pools are not yet defined, but they give great promise, and because of its large acreage Ohio hopes to obtain the benefit of orderly and economical operations.

"For years Ohio Oil Co. has been one of the largest purchasers and marketers of crude oil, buying at the well oil run by the Illinois Pipe Line Co."

In connection with the Transcontinental acquisition, Ohio Oil will exchange the value of its common stock to no par from $25 and two shares of the new stock will be exchanged for each share now outstanding, with an increase in shares to provide stock required for Transcontinental holders, who will receive four-sevenths of a share of new Ohio Oil common for each share of Transcontinental, and will participate in the next Ohio common dividend, now $1 quarterly, on the $25 par, of which there are at present 2,400,000 shares outstanding. Ohio Oil's new no-par common will be listed on the New York Stock Exchange.

Union Oil

Union Oil Co. of California has offered employes privileges to purchase, on the partial payment plan, stock of the company at $40 a share. The offering will be made through the Union Oil of California provident fund. Subscriptions must not amount to more than 125 per cent of the employes annual salary and not less than five shares of stock. Payment for the stock will be spread over a five-year period at the rate of 70 cents a month. Interest at the rate of 6 per cent will be charged on the unpaid balance.

Twenty Representative Stocks

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange and New York Curb, based on closing quotations for Saturday, was as follows:

Jan. 29	47.46	Apr. 16	53.39
Feb. 5	48.13	Apr. 23	53.70
Feb. 12	47.49	Apr. 30	50.23
Feb. 19	45.85	May 7	51.67
Feb. 26	46.71	May 14	49.71
Mar. 5	46.79	May 21	50.98
Mar. 12	48.30	May 28	50.94
Mar. 19	51.00	June 4	46.65
Mar. 26	51.55	June 11	43.41
Apr. 2	53.26	June 18	42.37
Apr. 9	52.04	June 25	44.12

Richfield Oil

Richfield Oil Co. of California declared regular quarterly dividend of 50 cents on common, payable September 1 to stock of record August 1. Directors changed the

TRANSACTIONS IN OIL SHARES ON NEW YORK STOCK EXCHANGE

Quotations Compiled by Francis, Bro. & Co., Members of the New York Stock Exchange and Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

1930 High	1930 Low	Week ended July 2 Close	High	Low	Close	Stocks—		Outstanding capital	Par value	Div. rate	Last paid	1927 High	1927 Low	1928 High	1928 Low	1929 High	1929 Low
		No sales.				Amerada Corp.	(sh)	922,075	N.P.	50cQ	1-31-30	37⅝	27⅝	43⅞	27⅛	42⅝	17½
31½	18	100	23⅛	23⅛	23⅛	American Republic Corp.	(sh)	209,180	N.P.	.....	3-20-29	82½	35⅛	85	51⅛	64¾	12½
37	15¼	300	17½	17½	17½	Associated Oil		$57,260,300	$25	50cQ	12-31-29	50¼	35	53⅜	37½	47¼	34½
51	32½	100	51	51	51	Atlantic Refining		$66,763,775	$25	25cQ	12-16-29	131⅜	104	66⅜	50	77⅞	30
51⅜	30⅛	1,400	35⅞	35⅜	35½	Barnsdall Corp.		$56,546,600	$25	50cQ	12- 7-29	35½	20¾	53	20	49⅛	20
34	20½	1,000	23⅛	22⅝	23⅛	Continental Oil of Delaware	(sh)	4,741,554	N.P.	.....	3-31-27	..	..	..	..	47⅛	18
30½	18⅜	2,100	20	19⅝	20	General Asphalt	(sh)	413,333	N.P.	50cQ	.....	96¾	65	94⅞	68	94¾	42¼
71⅛	38⅝	300	44½	43¼	44½	Houston Oil		$24,968,600	$100	.....	.....	175⅝	60⅛	167	79	109	26
116⅞	52¼	8,100	76½	74⅛	75¼	Independent Oil & Gas	(sh)	1,362,295	N.P.	50cQ	1-31-30	32¾	17⅝	38⅜	21¾	39⅜	17¾
32	19⅜	200	21½	21½	21½	Indian Refining		$12,565,070	$10	.....	5-31-24	12⅛	7⅝	39⅝	9	53	13⅛
28⅜	8⅞	2,100	11⅜	11	11	Lago Oil & Transport	(sh)	3,992,122	N.P.	.....	5- 1-27	37¾	20½	39½	27⅜	38⅜	16½
26½	21¼	1,200	25	24¼	25	Louisiana Oil Refining	(sh)	1,190,063	N.P.	.....	.....	18⅛	10	19¾	9⅜	18	7
12	8	1,000	9	8¾	9	Maracaibo Oil	(sh)	330,000	N.P.	.....	.....	22¾	12	25½	12½	18½	5⅛
10⅜	4½	500	5	5	5	Mexican Seaboard	(sh)	1,244,383	N.P.	.....	12-15-20	9¼	3	72	4⅝	69⅜	9¼
37	16⅛	3,900	20⅜	19⅜	20¼	Mid-Continent Petroleum	(sh)	1,857,912	N.P.	50cQ	12-15-29	39⅜	25½	44½	25⅛	39⅞	22⅛
33	22⅛	400	24⅝	24⅛	24⅝	Middle States, ctfs.		$23,736,130	$10	.....	7- 1-23	3¾	1⅝	7⅜	2⅜	5⅛	¾
2½	⅞	400	1	1	1	Pan American P. & T.		$50,084,700	$50	.....	10-20-27	65⅞	40⅛	54⅞	38¼	69	40½
67½	50½	1,900	56⅜	56	56¼	Pan American P. & T. "B"		$121,110,650	$50	.....	11-15-24	66⅜	40¼	58⅞	37¾	69¼	40½
67½	50½	1,400	58⅛	57¾	57¾	Pan American Western B		$400,000	N.P.	.....	1-30-27	37⅞	16¾	28⅜	15½	18½	13⅜
		No sales.				Panhandle P. & R.	(sh)	199,370	N.P.	.....	.....	18⅞	8	21¾	11½	15¼	3
12¾	4⅛	200	7	7	7	Panhandle P. & R. pfd.		$2,564,400	$100	.....	7- 2-23	83	54	108	70	76	47½
80	47½	100	73	73	73	Phillips Petroleum	(sh)	2,593,075	N.P.	50cQ	1- 2-30	60¼	36¼	53⅞	35¼	47	24¼
44¾	29⅛	2,000	32¼	31½	32¼	Phillips Petroleum rts		.....	....	.....	.....	..	..	..	..	..	..
2½	1	600	1¼	1¼	1¼	Pierce Oil Corp.		$29,622,831	$25	.....	.....	1⅛	½	5¼	½	3⅜	1
7⅛	2¼	2,000	5	4½	4¾	Pierce Petroleum	(sh)	2,500,000	N.P.	.....	.....	5½	2½	7	3½	5⅞	½
54	36	600	38	37¼	37½	Prairie Oil & Gas		$60,848,000	$25	50cQ*	12-31-29	55½	45⅝	68	46	65⅝	40½
60	44⅛	300	46	45¼	46	Prairie Pipe Line		$101,250,000	$25	75cQ†	12-31-29	190	130¾	280	172	65	45
11⅞	6½	200	7⅜	7¼	7¼	Producers & Refiners		$37,438,950	$50	.....	9-15-23	33⅞	16¾	29⅞	16	25⅞	4
40	30	200	30	30	30	Producers & Refiners pfd.		$2,845,350	$50	.....	5- 1-25	50	36⅞	49⅝	41	46¾	25½
27¼	19½	700	20⅞	20⅝	20⅞	Pure Oil		$75,959,250	$25	37½cQ	12- 2-29	33½	25	31⅝	19	30¾	20
28¼	14¾	1,000	16	15¾	16	Richfield Oil		$52,410,875	$25	50cQ	11-15-29	28⅝	25⅜	56	23	49⅝	20
25¾	15⅝	1,000	17⅞	17½	17¾	Rio Grande Oil	(sh)	1,236,270	N.P.	$2A	7-25-29	..	..	37½	32	42½	15
56½	49⅛	1,400	53	52½	52⅞	Royal Dutch, N. Y.	(sh)	611,303	$1.873	.....	9-13-29	54½	44¼	64	44⅝	64	43⅛
48⅜	42⅜	10	44¾	44¾	44¾	Shell Transport & Trading Co.		£23,985,000	£1	$1.45	7-23-29	48⅝	40½	47⅞	41⅜	57½	40⅝
25½	18	1,200	18¾	18⅜	18¾	Shell Union Oil	(sh)	13,066,497	N.P.	35cQ	12-31-29	31¾	23⅝	39¼	23¼	31¾	19
37	18	200	21	21	21	Simms Petroleum		$8,353,620	$10	40cQ	12-14-29	25⅝	14¼	27½	18⅛	40⅛	15
32	20	6,400	22¾	21¾	22¾	Sinclair Consolidated	(sh)	5,500,000	N.P.	50cQ	1-15-30	22⅜	15	46¾	17⅜	45	21
112¼	108	100	110	110	110	Sinclair Consolidated pfd.		$16,025,250	$100	$2Q	11-15-29	104½	97	110	102½	111	103
42	28½	400	30⅛	30	30	Skelly Oil		$27,441,250	$25	50cQ	12-16-29	37⅜	24⅛	42⅝	25	40½	28
75	55½	1,300	60¼	60	60⅛	Standard of California	(sh)	12,594,098	N.P.	62½cQ	2-15-30	60¾	50⅜	80	63	81⅞	51⅛
49	29	300	31¾	30½	31¾	Standard Oil of Kansas		$8,000,000	$25	50cQ	12-16-29	20⅞	14⅝	37¾	15	33¾	18
84⅞	58	16,900	66⅝	65½	66	Standard Oil of New Jersey		$634,999,200	$25	25cQ*	12-16-29	41⅜	35⅛	59⅜	37¾	83	49
40⅝	30	2,700	32	31½	31¾	Standard Oil of New York		$445,223,675	$25	40cQ	12-16-29	34⅛	29¾	44¼	28¾	48⅛	31¾
70	50	200	55½	55½	55½	Sun Oil	(sh)	1,416,869	N.P.	25cQ	12-16-29	34⅞	30	77	31½	86⅜	55
9⅜	5	400	5¼	5⅛	5¼	Superior Oil Corp.	(sh)	776,979	N.P.	.....	12-20-20	..	..	..	..	24	5¼
60½	50⅛	6,100	51⅝	51	51⅝	The Texas Corporation		$246,204,900	$25	75cQ	1- 1-30	58	45	74¾	50	71⅞	50
14½	8¼	600	9⅜	9¼	9⅜	Texas Pacific Coal & Oil Co.		$9,304,890	$10	2½%A‡	12-31-29	18⅞	12	26⅝	12⅛	23⅞	9⅛
31	19½	200	30¾	28¾	30¾	Tide Water Oil	(sh)	2,191,759	N.P.	20cQ	12-31-29	29¼	19	41½	19⅝	40	14
94⅞	85½	100	87	87	87	Tide Water 5½% pfd.		$19,947,000	$100	$1.25Q	11-15-29	90⅛	85	100⅛	86	97½	85⅛
17⅜	10⅜	1,500	14⅞	14½	14⅞	Tide Water Associated	(sh)	5,560,424	N.P.	30cS	2-15-30	19⅛	15¾	25	14¾	23½	10
89¾	78	100	82	82	82	Tide Water Associated pfd.		$73,284,500	....	$1.50Q	2- 2-30	..	..	..	..	90⅞	74⅛
24	16¼	6,000	18⅛	17¾	18	Transcontinental Oil	(sh)	3,742,029	N.P.	.....	.....	10⅜	3¾	14¾	7¼	15¼	5⅛
50	37	900	41½	40	40	Union Oil of California		$104,342,375	$25	50cQ	11- 9-29	56½	39⅝	58	42⅜	57	42⅛
38½	25¼	500	29½	29	29	Union Tank Car	(sh)	1,254,048	$100	$1.25Q	12- 2-29	127½	94	128⅛	110	163¾	121⅛
27	12¾	200	13⅛	13⅛	13⅛	Warner-Quinlan	(sh)	632,948	N.P.	50cQ	1- 2-30	34½	24½	44⅞	26	42⅞	15
		No sales.				White Eagle Oil & Refining	(sh)	505,100	N.P.	50cQ	1- 20-30	27½	20	38	20⅛	38	25
21	11½	100	16¾	16¾	16¾	Wilcox Oil & Gas	(sh)	428,907	N.P.	.....	5-10-28	..	..	..	..	29¾	12⅞

*Plus extra dividend of 25 cents. †Plus extra dividend of 50 cents. ‡Payable in stock.
In comparing highs and lows for the several years in the three tables it will be necessary to take into consideration cases where there have been splits in the stock.

stock of record date, which on the basis for former payments would have been July 20. The payable date on the same basis would have been August 15.

Salt Creek Producers

Salt Creek Producers' Association declared the regular quarterly dividend of 50 cents, payable August 1 to stock of record July 15.

Amerada Corp.

Amerada Corp. declared the regular quarterly dividend of 50 cents, payable July 31 to stock of record July 15.

Mexican Eagle Oil

Mexican Eagle Oil Co., Ltd., controlled by Royal Dutch-Shell, shows net profit of $6,738,654 (Mexican) after depreciation and legal reserve, against net loss of $318,399 in 1928. The report says the results reflect the benefit obtained from increased production, which was practically double that of each of the two previous years.

There has been no material improvement in world prices, the annual report states, and directors do not expect any until world production has been brought down to a figure more in line with consumption than at present.

Reserve of $6,833,314, held for some years under the heading "freights adjustment and ships' replacement reserve," has been transferred to various reserves. This has been done because it is no longer necessary to retain such reserve owing to the transfer to Canadian Eagle Oil Co. of obligations and benefits of contracts with Eagle Oil Transport Co.

Future prosperity of the petroleum industry in Mexico and continued development of new areas, the report states, is still dependent on the extent to which the government will render assistance in order to re-establish the industry on a sound footing, particularly by relief from disproportionate high taxes and other burdens. "There are indications that the government is alive to the necessity of enabling the Mexican oil industry to compete successfully with other producing countries in the world's markets," the report states.

Hamilton Gas Co.

At a special meeting the stockholders of the Hamilton Gas Co. authorized changing the company's common stock from no par value to a nominal or par value of $1 per share exchangeable on the basis of one share of new $1 par common for each share of old no par stock. Net earnings after depreciation and depletion but before Federal taxes for the first five months of 1930 amounted to $394,747.42 including non-recurring profit as against $69,128.85 for the corresponding period of 1929.

INDEPENDENT OILS ON NEW YORK CURB

Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

1930 High	1930 Low	Week ended July 2 Close	High	Low	Close	Stocks—		Outstanding capital	Par value	Div. rate	Last paid	1927 High	1927 Low	1928 High	1928 Low	1929 High	1929 Low
⅜	⅛	2,200	⅛	⅛	⅛	Amer. Con. Oilfields		$11,018,000	$5	.....	.....	2 7/16	.55	1½	.53	72c	⅛
4½	1½	800	2¼	2⅛	2⅛	Amer. Maracaibo	(sh)	700,000	N.P.	.....	.....	7½	2¾	9½	3⅛	8⅝	1⅛
1⅜	1	200	1¼	1¼	1¼	Argo Oil	(sh)	683,971	$10	.....	.....	2¾	1	4½	2¼	5	1½
21	17	x100	17	17	17	British American (new, C.W.I.)		$1,311,321	N.P.	25cQ*	1- 2-30	40	20½	55	32¾	62	7⅞
2¾	¾	600	1¼	1⅛	1¼	Carib. Syndicate		$131,250	25c	.....	.....	28¼	15½	4½	3⅞	4⅞	1
44¼	24⅛	17,900	26¾	26¼	26¾	Cities Service	(sh)	24,290,359	N.P.	30cA†	1- 2-30	58¾	40¼	90⅞	54	68⅛	20
93⅞	88	200	88¾	83½	88¾	Cities Service pfd.	(sh)	1,500,000	N.P.	50cM	1- 2-30	95⅝	87	103½	94½	98¾	84
No sales.						Cities Service, rts.		.....	.....	.....	.....	..	..	..	..	..	..
¾	¼	400	⅜	⅜	⅜	Columbia Syndicate		$2,000,000	$1	.....	.....	3⅞	1⅛	3¼	.76	2	½
5⅝	¼	100	⅜	⅜	⅜	Cons. Royalty		$5,000,000	$10	15cQ	10-25-29	9¾	6⅜	8⅞	6¼	11⅛	2½
7⅝	5½	200	6	5⅞	5⅞	Creole Petroleum E	(sh)	5,977,873	N.P.	.....	.....	14⅞	9½	17½	9½	11¾	5⅝
1	¼	200	½	¼	¼	Crown Central	(sh)	587,000	N.P.	.....	.....	3	.50	3¼	.76	2½	¼
21¾	12	1,000	13⅝	12¾	13½	Darby Petroleum	(sh)	1,019,392	N.P.	25cQ	1-15-30	12	4	33½	3¼	26	6½
11	4½	100	6⅝	6⅝	6⅝	Derby Oil & Refining	(sh)	500,000	N.P.	.....	.....	2½	74	2¼	1	11	2
60	30	150	44⅛	40	40	Derby Oil & Refining pfd		$48,500	N.P.	.....	.....	16¾	4	21⅛	7½	44	20¾
166⅞	117⅛	600	123½	122⅛	123½	Gulf Oil Corp.	(sh)	4,504,921	$25	37½cQ	1- 1-30	118	86¼	165	101⅛	209	115
1¾	¾	2,300	⅞	¾	⅞	Intercontinental Pet.		$5,682,000	$5	.....	.....	2½	.80	3⅜	1	2⅞	⅜
3	1¼	200	1⅞	1⅞	1⅞	Kirby Petroleum	(sh)	750,000	N.P.	.....	.....	2¼	1⅛	3	1¼	3⅝	1¼
4¾	1⅛	1,300	1¾	1⅝	1¾	Leonard Oil & Dev.		$50,000,000	$25	.....	.....	10⅞	5⅛	9⅜	5⅛	6⅛	1
29	18⅝	400	22½	22½	22½	Lion Oil & Refining	(sh)	250,000	N.P.	50cQ	1-31-30	27½	20	43⅞	20	38⅞	18
55⅞	34⅛	1,600	37	36½	37	Lone Star Gas	(sh)	5,000,000	N.P.	20cQ	12-31-29	59⅜	37	69⅛	48½	67⅞	28
4⅝	1¾	6,700	2⅝	2¼	2¼	Lone Star Gas rts.		.....	.....	.....	.....	..	..	..	..	..	..
½	⅛	500	¼	¼	¼	Magdalena Syndicate	(sh)	850,000	$1	.....	.....	2⅞	.80	1⅞	.50	1¼	¼
16	12	100	12½	12½	12½	Margay Oils		$160,000	N.P.	50cQ	1-10-30	52	12	48½	32	38½	14
7½	2	200	3	3	3	Mexico-Ohio Oil		.....	.....	.....	.....	12⅛	5	8	2¾	6⅜	2½
¾	⅜	400	½	½	½	Mountain & Gulf		$4,000,000	$1	2cQ	1-15-30	1½	1	1⅜	.76	1½	¼
12⅛	8	700	8¼	8¼	8¼	Mountain Producers		$1,682,182	$10	40cQ	1- 2-30	29¼	22¾	28⅞	19½	22⅞	7
3½	2⅜	x900	2⅜	2⅝	2⅝	New Bradford Oil		$1,095,291	$5	12½cQ	1-15-30	5⅞	4⅝	5⅝	4¼	5	2¼
7¼	3⅛	100	3⅛	3⅛	3⅛	New Mex. & Arizona		$1,000,000	$1	.....	.....	16	9¼	11⅞	7⅛	9⅜	2¼
11¼	6	200	6¾	6¾	6¾	North Central Texas	(sh)	400,000	N.P.	15cQ	12- 2-29	12¾	9½	14¼	8½	18½	6⅛
2½	¾	7,100	1	¾	⅞	Pandem	(sh)	489,875	N.P.	.....	.....	9⅜	3¼	6	2⅛	3½	½
4⅜	1⅞	200	2⅛	2⅛	2⅛	Pantapec Oil	(sh)	1,506,000	N.P.	.....	.....	12⅛	7	15⅝	8½	10¼	1⅞
No sales.						Pennok Oil		$150,000	N.P.	.....	.....	13½	5⅛	7¾	4⅞	7¾	4⅜
10½	8½	100	8½	8½	8½	Red Bank Oil	(sh)	250,000	N.P.	.....	.....	24⅜	7	18	4⅞	16	9⅝
5⅜	2⅛	600	3⅞	3¾	3⅞	Reiter-Foster	(sh)	388,584	N.P.	10cQ	12- 9-29	15½	3½	12⅞	4⅛	8½	1⅜
8⅝	3⅝	100	5½	5½	5½	Ryan Consolidated	(sh)	500,000	N.P.	.....	.....	7	4½	12	4⅛	11	3
2½	1⅜	100	1¾	1¾	1¾	Salt Creek Consolidated	(sh)	1,286,300	$10	10cQ	1- 2-30	8	5¼	7¼	5½	5⅞	1⅞
15¼	9⅛	100	10⅛	10⅛	10⅛	Salt Creek Producers	(sh)	1,496,859	$10	50cQ	2- 1-30	35½	27¼	35	23⅛	25⅞	9
1	½	100	½	½	½	Savoy Oil		$750,000	$5	.....	.....	7	1¼	3½	1	2½	7/16
No sales.						Transcontinental pfd		.....	.....	.....	.....	..	..	..	..	..	..
4½	2	200	2¼	2¼	2¼	Venezuelan Petroleum	(sh)	755,090	$5	5cQ	11-15-29	7⅜	4¼	9½	4¾	6½	1¾
5	2	600	4	4	4	Woodley Petroleum		$500,000	$1	.....	.....	7	4⅜	8¼	4⅞	9½	2
2½	½	100	1⅛	1⅛	1⅛	Y Oil & Gas (new)		$100,000	N.P.	.....	.....	6	1¾	8⅜	2⅛	2⅞	¼

*Including one-half per cent monthly in stock. †Payable monthly and a monthly stock dividend of one-half per cent. x Ex-dividend.

STANDARD OIL STOCKS ON NEW YORK CURB

Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

1930 High	1930 Low	Week ended July 2 Close	High	Low	Close	Stocks—		Outstanding capital	Par value	Div. rate	Last paid	1927 High	1927 Low	1928 High	1928 Low	1929 High	1929 Low
181½	121¼	400	18½	18⅜	18½	Anglo-American Oil (vot. C.O.D.)		£4,192,635	£1	.36 8/16	11-27-29	21⅝	17⅞	22⅜	14⅞	17	11
1	⅜	200	½	⅜	⅜	Atlantic Lobos		.....	.....	.....	.....	..	..	..	..	..	..
25	14	100	20	20	20	Borne Scrymser		$1,000,000	$25	$1SA	10-15-29	69	50	56½	44½	46½	25
69	55¼	100	55¼	55¼	55¼	Buckeye Pipe Line		$10,000,000	$50	$1Q	12-14-29	60	45	76	53	74¼	55
184⅞	140⅛	100	148	148	148	Chesebrough Mfg.		$3,000,000	$25	1Q*	12-30-29	126	76½	161	117	210	130
17⅜	10	300	10	10	10	Continental Oil (V.T.C.)		$36,057,840	$10	.....	12-15-27	22⅝	16¼	23	16	29	10
63¾	35	100	35	35	35	Cumberland Pipe Line		$1,500,000	$50	$1Q	12-15-29	137	89	114	67	75¾	40
54¾	41½	300	41	41	41	Eureka Pipe Line		$5,000,000	$100	$1Q	11- 1-29	68½	47	88	64⅛	70½	42
7	2½	300	4	4	4	Galena Oil Corp.		$16,000,000	$100	.....	.....	13½	3½	13	4¼	6½	3
119	78	700	90	88	89½	Humble Oil & Refining		$74,103,300	$25	50cQ	1- 1-30	68½	54	114¾	59¼	128	74⅛
311	305	100	307	307	307	Illinois Pipe Line		$20,000,000	$100	$10SA	12-16-29	182	123¾	290½	176½	340½	260
30	18⅛	700	19⅝	19⅝	19⅝	Imperial Oil of Canada (new)	(sh)	26,421,768	N.P.	12½cQ	12- 2-29	64¾	37¾	104	56¾	41	22
41	31⅞	300	32¼	32⅛	32¼	Indiana Pipe Line		$3,000,000	$10	50cQ‡	2-15-30	94½	61	91⅞	74⅜	41⅞	26
24	17⅝	900	18¾	18¼	18¾	International Pet.	(sh)	14,247,088	N.P.	12½cQ	12-16-29	29	28¼	55	35	30⅜	15
22⅜	15⅛	600	17⅛	17⅛	17⅛	National Transit		$6,362,500	$12.50	25cQ‡	12-16-29	24	13½	32⅜	19⅜	25⅛	10½
21⅜	10⅛	100	15¼	15¼	15¼	New York Transit (new)		$1,000,000	$10	40cQ†	1-15-30	44½	31¼	75	38⅛	17½	10
54	35½	500	39	35½	35½	Northern Pipe Line		$2,000,000	$50	$2SA	1- 2-30	100	70	69	56½	63	41
76⅜	62⅛	1,200	65½	65	65⅛	Ohio Oil		$60,000,000	$25	5cQ‡	12-14-29	67⅞	52	84	58½	79⅞	64⅛
32	17	100	19⅞	19⅞	19⅞	Penn Mex. Fuel		$10,000,000	$25	50cQ	12-14-29	39	12	84	28	44½	20
33	15	100	15	15	15	Solar Refining		$4,000,000	$25	$1.25SA	12-20-29	..	..	..	..	50	29
20⅞	13	100	16⅛	16⅛	16⅛	Southern Pipe Line		$1,000,000	$10	50cQ	.....	27¼	15½	19	15	22½	13
45⅞	35	300	37	37	37	South Penn Oil (new)		$30,000,000	$25	50cQ	12-30-29	41½	35	71⅞	36¾	60¼	35⅛
65	45¼	100	45¼	45¼	45¼	Southwest Pa. Pipe Lines		$1,750,000	$50	$1Q	1- 10-29	83	55½	102	70	70	60
59⅞	47⅝	2,500	50⅛	49⅞	50	Standard Oil of Indiana		$348,175,069	$25	62½cQ‡	12-16-29	81½	64⅜	95⅞	70⅞	63	45
40½	30⅛	400	32½	31½	31⅞	Standard Oil of Kentucky		$25,654,516	$10	40cQ	12-16-29	130	111½	179¾	122¼	46⅞	29
48⅞	44⅛	100	46⅜	46⅜	46⅜	Standard Oil of Nebraska		$4,649,225	$25	62½cQ‡	12-20-29	49½	40	54⅞	39⅞	50¼	40
108½	77	50	80	80	80	Standard Oil of Ohio		$14,000,000	$25	62½cQ	1- 2-30	87½	72	134	71	129	60
10	7	100	7	7	7	Swan-Finch Co.		$861,466	$25	.....	12- 2-29	21	14½	23½	16	18	10
97⅞	76¼	1,100	82¾	81½	82	Vacuum Oil Co.		$126,180,350	$25	$1Q	12-20-29	..	..	111	72	133¾	75

*Plus 50 cents extra. †Plus 10 cents extra. ‡Plus 25 cents extra. x Ex-dividend.

MARKED IMPROVEMENT IN SENTIMENT IN THE EAST

(Continued from Page 137)

States will be reduced to any extent, as producers are drawing on storage stocks to keep their shipments up to required totals.

California Oil Receipts

Receipts of California crude and refined oils at Atlantic and Gulf Coast ports for the week ended June 28 totaled 525,000 bbls., a daily average of 75,000 bbls., compared with 497,000 bbls., a daily average of 71,000 bbls. for the previous week and a daily average of 64,893 bbls. for the four weeks ended June 28. Details follow:

(Barrels of 42 Gallons)

At Atlantic Coast Ports—	
Baltimore	60,000
New York	297,000
Philadelphia	150,000
Others	18,000
Total	525,000
Daily average	75,000
At Gulf Coast Ports—	
All ports	None
At Atlantic and Gulf Coast Ports—	
Total	525,000
Daily average	75,000
Daily average four weeks	64,893

Distribution of total California receipts is as follows:

Gasoline	386,000
Gas oil	64,000
Fuel oil	75,000

CHICAGO SITUATION IS MUCH IMPROVED

(Continued from Page 136)

market is described as "2 cents to buy for a good U.G.I. gas oil and 2⅛ cents to sell, if you can get it." There has been some buying of gas oil by one of the local railroads which is not particular as to specifications asking only for a 32 gravity oil.

Tax Free Gasoline

A sign that greets the eye quite commonly with the local service stations reads: "Six gallons of gasoline for one dollar." This equals 16⅔ cents a gallon while the local service station price is 19 cents. Some of the service stations are selling at what they call "Tax Free Gasoline Prices." This is, of course, 16 cents. Only does an occasional price cutter say that business is good with him and it is really a wonder if price cutting pays but somebody starts it and the rest in the vicinity seem to feel they will all lose a lot of business if they do not follow. The local Q.D.A., of 5 cents for any dealer who sells more than 1,000 gallons a month is the reply of the major companies to these price cuts but unless the dealer reduces his price the consumer does not know it, unless he takes some pains to advertise the fact of the quality of his material and the satisfaction which comes from the use of good material of any make or kind. Of course none of the price cutters have Ethyl to attract some trade but some of them have a really fine antiknock gasoline which they can use with good effect. An antiknock gasoline which several very large distributors have stated was in their opinion the best antiknock gasoline in the country is available to these dealers. Yet it is a fact that the very distributors who praised this material so highly have discarded its sale in favor of Ethyl Gasoline.

SOCONY-VACUUM MERGER TO HAVE OPEN HEARING

(Continued from Page 34)

with Shell in their foreign operations. The rapid increase in Shell's operations in Venezuela, generally considered the producer of the world's lowest cost crude oil at present, is said to have made imperative a consolidation of foreign interests of Vacuum and Socony, in order to permit them to protect their extensive foreign investments by consolidating operations and develop further outlets for their products.

Whether Vacuum and Standard of New York plan to seek foreign sources of crude oil in their projected expansion of foreign marketing operations is a question of general interest to the American oil industry. Neither of the two companies has ever handled foreign crude in a large way at their refineries, concentrating on domestic production. With Shell in a favorable competitive position, owing to its heavy production of low-cost South American crude, it is believed that the Vacuum-New York combine, when effective, will either develop its own foreign production or tie up more strongly than ever with the Soviet oil industry through the placing of long-term contracts for the purchase of huge quantities of Russian refined products for marketing abroad.

Dissolution Decree

The proposal to consolidate Vacuum and the New York Standard company has been "in the making" for a long time, although nothing official in this connection was forthcoming until within the past year. Owing to the terms of the dissolution decree of 1911, the New York Standard company in acquiring Magnolia Petroleum and General Petroleum submitted plans for both acquisitions to the Department of Justice prior to definite action and failing of objection by the department, both deals went through. The proposed consolidation of Vacuum and Standard of New York was also submitted to the department, but disapproved. Following this disapproval, the companies in January of this year made a joint announcement of their projected merger plans, stated that the Department of Justice had disapproved, and added that a suit would be brought to test the legality of such a combine. The Department of Justice instituted action in this direction, filing in the United States district court in St. Louis a suit charging that the proposed consolidation would be in violation of the dissolution decree of 1911, inasmuch as both companies had been subsidiaries of the Standard Oil Co. of New Jersey. The Government in 1906, in the same court, filed its complaint against the old Standard Oil Co. which led up to the famous dissolution decree of 1911.

The hearings which got under way in New York this week are expected to continue for some time. Attorneys of the Socony and Vacuum companies are basing their defense on the contention that their proposed consolidation is not a violation of the dissolution decree, as the decree could not restrain these former subsidiaries from making trade agreements or effecting consolidations so long as these were not in violation of the Sherman antitrust laws. Consolidation of the two companies, it is contended, will not in any manner again bring into being the combination or conditions which were adjudged to be in restraint of trade in 1911. Attorneys for the two companies have stated their position that when the Vacuum and Standard of New York organizations were segregated nearly 20 years ago, they did not lose the right to deal with their properties and businesses in any manner which would be lawful for any other American organization.

The present court proceedings to test the validity of the proposed Standard of New York-Vacuum merger are being watched with the closest of interest by the oil industry, which sees in this proceeding a test case involving all of the former Standard Oil subsidiaries. A successful culmination of the case, from the standpoint of the Socony-Vacuum merger, it is felt, would in all probability be the forerunner of other consolidations affecting former subsidiaries of the old Standard Oil Co. of New Jersey. . . . . .

Taking of Testimony

Counsel for the Government placed on the stand a number of independent service station operators from points in New York and New England, who testified that they sold products of both Standard Oil Co. of New York and Vacuum Oil Co. and that sales representatives of both companies regularly call on them. This was designed to prove that direct competition between the two companies actually exists, and that the consolidation will effect a lessening of competition in the area.

Seven witnesses, all well known to the oil trade, testified in the second day's proceedings, the witnesses being A. C. Woodman, president of the Richfield Oil Corp. of New York, William J. O'Sullivan, treasurer of the American Oil Co.; George Frankel, treasurer of the Warner-Quinlan Co.; Richard A. Wotowitch, an executive of the petroleum division of Henry L. Doherty & Co.; Torkild Reiber, vice president in charge of export operations of The Texas Company; Robert G. Stewart, president of the Pan American Petroleum & Transport Co., and Arthur G. Madigan, president of the Higrade Petroleum Co. of Buffalo.

These witnesses, all of whom were subpoenaed by the Government, testified that competition in the petroleum industry in New York and New England is very keen and that a reduction in price by one company, whether Standard Oil Co. of New York or any other of the larger interests, must be followed by all of the others in most instances. They also agreed that a given company should name all the companies operating in its field as competitors.

Relative Sales

Socony, while operating in New York State and New England, does the largest percentage of its business in its home state, testimony showed. During 1929 the company sold 9,880,975 bbls. of gasoline, while Vacuum sold 538,701 bbls., out of total sales for all companies in this State of 29,296,000 bbls. Standard of New York sold in 1929 a total of 618,959 bbls. of kerosene and Vacuum 9,513 bbls., out of total sales for all companies in the State of 1,913,000 bbls. Combined sales of fuel, furnace, gas and Diesel oils by Socony in New York State during 1929 aggregated 5,434,037 bbls. and those of Vacuum 173,945 bbls., out of total sales by all companies of these products in New York State of 39,413,000 bbls. Lubricating oil sales in New York State for the past year amounted to 2,161,000 bbls., of which total Socony handled 527,478 bbls. and Vacuum 172,013 bbls.

Mr. Woodman, in his testimony, stated that in his opinion no one company dominates the gasoline and motor oil market in the New York and New England area, but that his company (Richfield Oil Corp. of New York) was obliged to post gasoline prices following the lead of the merger companies in order to meet competition. Richfield of New York, he said, adopted the schedule of prices posted by Standard Oil Co. of New York on February 1, 1930. During the course of Mr. Woodman's testimony it developed that Richfield of New York recently purchased 100,000,000 gallons of gasoline from Simms Petroleum Co.

Robert G. Stewart, president of Pan American, said in his testimony that while Pan American markets gasoline at prices determined by conditions prevailing in various districts in its territory, it usually posts the same prices in the New York-New England area as are named by the Standard Oil Co. of New York. Mr. Stewart added the information that competitive conditions in this territory are very keen.

Competitive Prices

Torkild Reiber, vice president in charge of export operations for The Texas Company, said that his company is not influenced by prices posted by Standard Oil Co. of New York for gasoline, but that competitive conditions alone determined the prices at which refined petroleum products are sold.

The other oil company executives who testified during the day gave testimony along the above lines, indicating that while conditions peculiar to each division of the territory determine retail prices, revisions in quotations by any of the major factors generally determine the prices of competing companies as well.

R. H. Johnson, chief statistician for the Vacuum Oil Co., identified maps and charts prepared by him showing sales of various products in various states, and described at some length Vacuum Oil Co.'s marketing facilities and practices. During the course of his testimony he brought out the fact that Vacuum products are sold through Standard Oil Co. of New Jersey, Standard Oil Co. of Indiana, Standard of California, Standard of Kentucky, Standard of Louisiana, Continental Oil Co. and Phillips Petroleum Co. Vacuum, he said, has recently acquired the Great Western Oil Co. and Commonwealth Oil Co. of Ohio.

John H. Amen, special assistant attorney general, who is conducting the case for the Government, asked each witness: "What company, if any, in your opinion, dominates in your territory?" In reply to this query, William J. O'Sullivan, treasurer of the American Oil Co., which owns or supplies 125 retail stations in the Boston area, declared that Standard of New York dominated so far as number of outlets is concerned, and until last February was in control of making prices. At that time, he said, Shell Eastern Petroleum Corp. refused to accept the Socony method of pricing, and the New York company was forced to adopt the Shell policy.

Joseph H. Weggman, treasurer of Woodfill & Weggman of Rochester, N. Y., distributors for Kendall Refining Co., stated that Vacuum has been increasing its gasoline distribution during the past two years and that there was no question about there being active competition in his territory between Vacuum and Socony. He asserted that Socony initiated all price changes on gasoline in the territory with other companies following the action of the New York company. Mr. Weggman declared that 30 companies distribute petroleum products in Rochester but that his company paid no attention to their prices. Other witnesses also testified that Standard of New York initiates gasoline price changes in its territory with the other companies generally making their prices conform within a few days. Witnesses included Warren S. Keith, treasurer of the Keith Oil Corp., of Brockton, Mass.; Lucius Duty, vice president of the A. R. Newcombe Oil Co. of Kingston, N. Y.; Marshall B. Hall, president of the Liberty Oil Co., of Boston; G. B. Pierce, vice president of the Raido Oil Co., of Worcester, Mass.; Harvey Maybeck, vice president of Myers & Pfeiffer Co., of Batavia, N. Y.; Frank E. Keenan, operator of a filling station in Rochester, and Fred Kelly of the Sunshine Oil Co. of Rochester, N. Y.

Oral testimony for the Government was concluded Tuesday and a recess taken for the balance of the week in order to permit government counsel and accountants to check records taken from the files of the defendant corporations.

ST. CLAIR PRESIDENT OF UNION OIL CO.

(Continued from Page 40)

moved to Bakersfield and built that city's first gas lighting and heating plant. Mr. St. Clair, in the construction and development of this plant, held virtually every position from laborer to that of manager. It was his activities in the light and power business in Bakersfield which eventually caused him to devote his entire subsequent attention to the oil business. He has been one of the most outspoken men in the California oil industry and one of its most vigorous leaders.

E. W. Clark, newly elected chairman of the board, was an executive of the Union Oil Co. for 15 years and was for two years president of the American Petroleum Institute of which he was one of the organizers. He is a native of New Hampshire, coming West in 1876. He was manager of the Union Oil Co.'s producers pipe line in 1910, elected a director and vice president in 1914, became general manager in 1916, and executive vice president in 1921. He resigned from the latter post in July, 1929 to devote more time to his personal affairs but remained on the executive committee and board of directors.

W. L. Stewart, Jr., son of the late president, who was elevated to the position of vice president in charge of the manufacturing group, is a graduate of Massachusetts Institute of Technology. He entered the employ of the Union Oil Co. and has worked his way up through the ranks on sheer ability. He was assistant to R. E. Haylett, then technical assistant to the vice president in 1926. He was elected a member of the board of directors at the close of 1926 and in July, 1929, was advanced to the position of director of manufacturing.

VAN POOL'S UNIT PLAN CHALLENGED BY LEGAL PERMISSION TO DRILL

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., July 7.—Another fly in the ointment of the Unit Plan No. 1 in the Van Field, Van Zandt County, appeared this week when Broderick & Calvert, independent operators of Fort Worth, obtained legal permission to drill the 2.07-acre tract which lies along the north side of the Mrs. M. F. Shirley tract in the John Walling Survey, about midway between the Humble Oil & Refining Co. and Gulf Production Co.'s No. 1 Carroll in the 95-acre tract of the William Daniel Survey which extended production 1¼ miles to the northeast last week, and producing wells to the west in the field proper.

The Pure Oil Co., which owns surrounding acreage, formerly obtained an injunction against the two operators to prevent drilling this small tract, but unless an appeal is taken by the Pure they will now be allowed to go ahead with operation of the lease. If an appeal is not granted, and the well comes in a commercial producer, which is likely, about six offset wells will have to be drilled by the Pure Oil Co. on its offset leases, and the Shell Petroleum Corp.'s offset lease to the west. Pure has acreage on all sides of this plat, except on the west, which is owned by Shell.

Nothing further has been announced as to the second unit plan for the field, which was thought sure to result from the completion of the northeast extension well mentioned, which lies on acreage just outside of Unit Plan No. 1, but it is known that companies operating in the field, and holding this acreage, have been in conference in regard to such a plan, and announcement of definite action may be made at any time. The Pure Oil Co., which operates all leases on acreage lying in Unit Plan No. 1, and which has constructed a 10-inch line from the field to Smiths Bluff on the Gulf Coast, has laid a 6-inch line to the Humble well and is taking the production, which has been running around 670 bbls. daily through a three-eighths inch choke.

Many wildcat locations were staked in East Central Texas during the past week and activities in this area show a decided change over the past few weeks' status.

The Red Bank Oil Co. is moving in material on a location staked on its acreage 4 miles southwest of Athens in Henderson County, this area having been detailed by its geologists, and the location staked on structure mapped by them. The Sunray Oil Co. also staked a location for its No. 1 Davis in this county, in the Eldridge Harris Survey, and the Sun Oil Co. is starting to core test Sun-Simms block, which lies southwest of LaRue on the D. O. Warren farm in the E. Edwards Survey and on the R. M. McGuffey farm in the W. L. Robbitt Survey.

Deep Rock Oil Co.'s No. 1 First National Bank, in an 80-acre tract in the Henry Cul Survey, 7 miles southeast of Mount Vernon, Titus County, which has an elevation of 413 feet, and which topped the Pecan Gap chalk at 2,406-2,828 feet, had a showing of gas and salt water at 3,733 feet in sand, the gas estimated as about 500,000 feet. It is now drilling at 3,765 feet.

E. L. Chapman's No. 1 Wolverton in the William James Survey, 1 mile south of Wills Point in Van Zandt County, is another wildcat which had a showing this week. It tested sand from 540-50 feet, the sand carrying an oil show, and the present plan is to move in a spudder.

An interesting test for Van Zandt County has been staked by Harry Helms and others on the J. M. Brown farm in the Marshall University Survey No. 504, approximately 3½ miles southeast of Van, the first wildcat test to be drilled in this direction from the pool, consequently an interesting test for this area.

EAST CENTRAL TEXAS

Boggy Creek	3,605
Cedar Creek	25
Currie	309
Hill County	35
Mexia	4,166
Minerva	568
Nigger Creek	175
Powell	5,790
Richland	205
Thrall	40
Van	25,615
Wortham	815
Total week ending July 5	41,348
Total week ending June 28	40,884
Increase	464

COMPLETIONS IN EAST CENTRAL TEXAS

Limestone County

Rube Evry's No. 1 Jeph Anglin, dry and abandoned, total depth 1,637 feet.

Titus County

Canada Oil Co.'s No. 1 Wolcott, in S. N. Smith Survey, dry and abandoned, total depth 3,818 feet.

Van Zandt County

Pure Oil Co.'s No. 1 Clark, total depth 2,932 feet, initial production 428 bbls. in 24 hours. Same company's No. 6 R. L. Wells, initial production 313 bbls. in 24 hours, total depth 2,923 feet. Same company's No. 1 E. V. Tunnell, initial production 373 bbls. in 24 hours, total depth 2,930 feet.

Anderson County

Navarro, Sun and Humble Oil & Refining Co.'s No. 1 Gardner, dry and abandoned, total depth 3,365 feet, top salt 3,230 feet.

Henderson County

Shell Petroleum Corp.'s No. 1 Stephens, dry and abandoned, total depth 4,815 feet.

Kaufman County

Sowell and others' No. 1 Ables, dry and abandoned, total depth 630 feet.

EAST CENTRAL TEXAS WILDCATS

Week Ending July 7

ANDERSON COUNTY

Sun Oil Co.'s No. 2 Bowers & Maier, 150 ft. from S and 140 ft. N of SW, 1,450 ft. SW of SE lines of tract ..... Drlg. 1,858 ft.

DELTA COUNTY

C. A. Everts' No. 1 Smith, 300 ft. N and 150 ft. W of 38-ac. tract, 3 miles NE of Cooper in J. U. Ranfro Sur. ..... Location.

FANNIN COUNTY

North American Pet. Co.'s No. 1 Allen, 700 ft. N and 150 ft. W in N. R. Broadfoot Sur., 9 miles N of Honeygrove ..... Location.

E. M. Rogers' No. 1 McSwan, 300 ft. S and E of Michael Daly Sur., in Juana Telgando Sur., 1½ miles NE of Lomasco ..... Shut down 1,100 ft.

HENDERSON COUNTY

H. E. Ashburn et al's No. 1 T. E. Barry, center of Barry's 55-acre tract in A. York Sur. ..... Shut down 2,425 ft.

Chapman's No. 1 Cade, 1,662 ft. from N and 3,294 ft. from W of J. B. Dorsey Sur. ..... Shut down 3,100 ft.

Cranfill & Germany's No. 1 Clara C. Stow, 2,203 ft. from N and 471 ft. from S of Guadalupe Acosta Sur. ..... Set 10-in. csg. 240 ft.

George Pace et al's No. 1 Mrs. Sarah Anthony, 273 ft. N and 132 ft. W of SE cor. of S. Anthony 632-ac. tract, Jose W. Battvan Sur. ..... Derrick.

Sunray Oil Co.'s No. 1 Davis, 600 ft. S and W of most easterly NE cor. of 164-ac. tract, Eldridge Harris Sur. ..... Location.

HUNT COUNTY

Branson et al's No. 1 West, 350 ft. N, 350 ft. W of W 60-ac. tract, Jas. Rooces Sur. ..... Drlg. 1,680 ft.; top Austin chalk 1,415 ft.

KAUFMAN COUNTY

Shaw & Alexander's No. 1 Barrow, 2,360 ft. S and 200 ft. W of R. A. Terrell Sur., 4½ miles N of McCoy ..... Location.

LAMAR COUNTY

Everett & Allen's No. 1 Guest, 250 ft. S and 2,046 ft. E of 100-ac. tract, L. Roberts Sur. ..... Location.

LIMESTONE COUNTY

Rube Evry's No. 1 Jeph Anglin ..... Dry and abandoned 1,637 ft.

NAVARRO COUNTY

Bateman Oil Co.'s No. 1 McGowan, 250 ft. from S and 3,000 ft. from E in Morris Webb Sur. ..... Drlg. 2,550 ft.; top Austin chalk 2,327 ft.

Killam & Phillips' No. 1 Wilson, 150 ft. S and E of 62½-ac. tract in Wm. Bridges Sur. ..... Location.

Navarro Oil Co.'s No. 2 Mathews, 3,600 ft. from S and 1,140 ft. from W of Smith Sur., 3 miles E of Dawson ..... T. D. 1,450 ft.; fishing.

Wheelock's No. 1 Castles, 150 ft. from S and W of 31.5-ac. tract in Abner Mathews Sur., 1 mile N of Eureka ..... Drlg. 2,470 ft.; top Austin chalk 2,410 ft.

Young et al's No. 1 Farmer, 700 ft. from S and 400 ft. from E of 110-ac. farm in F. Finley Sur. ..... Drlg. 875 ft.

RAINS COUNTY

Everett & Morrison's No. 1 Franklin, 640 ft. from S and E of 75-ac. tract in John Christian Sur., 6 miles SE of Emory ..... Spudded and shut down.

Owens & Sloan's No. 1 Hill, 150 ft. out of NW cor. of 150-ac. tract, T. McMahon Sur. ..... Drlg. 3,984 ft.

RUSK COUNTY

Mass et al's No. 1 Mathews, 2,244 ft. from N, 4,356 ft. from E, Dalines Cartinas Sur. ..... Rigging up.

SMITH COUNTY

McElreath & Suggett's No. 1 J. Gilliam, 200 ft. from N and 200 ft. from W of Gilliam 78-acre tract, J. C. Robertson Sur ..... Derrick.

Owens & Sloan Oil Co.'s No. 1 Starnes, 846 ft. along W lines of John Waller Sur. from NE cor. of J. O. Dillard Sur., and 80 ft. E at right angles to W line of J. Waller Sur. ..... Shut down 1,332 ft.

Sutton et al's No. 1 W. D. Hammond, 150 ft. out of SW cor. W. D. Hammond tract in Jas. Reed Sur. ..... T. D. 3,824 ft.

Winona O. & G. Co.'s No. 1 Freeman, 150 ft. from S, W of 89-ac. tract in A. J. Lagrone Sur., 4 miles SE of Winona ..... Derrick.

TITUS COUNTY

Canada Oil Co.'s No. 1 Walcott in S. N. Smith Sur. ..... Dry and abandoned 3,818 ft.

VAN ZANDT COUNTY

L. R. Barton's No. 1 Wamble, 300 ft. from S and W of 100-ac. tract in Pleasant Young Sur. ..... Derrick.

Century Oil Co.'s No. 1 L. A. Stewart, 1,200 ft. N, 132 ft. E of SW cor. of A. J. Hershley Sur. ..... Drlg. 4,200 ft.; cored sand 3,887-3,908 ft.; base Austin 3,855 ft.

E. L. Chapman's No. 1 Charles Wolverton, 215 ft. from N, 60 ft. S of NE cor. of Wolverton 10-ac. tract, William James Sur. ..... Drlg. 2,200 ft.

T. Daniels' No. 1 Fannie Cumbine, 185 ft. S and 175 ft. E of NW cor. 156-ac. tract, John Wright Sur. ..... Will start up.

Dennis Oil Co.'s No. 1 C. W. Morris, 100 ft. from N and 300 ft. from E lines of Morris 160-ac. tract in C. L. Morris Sur., 5 miles SE of Ben Wheeler ..... T. D. 3,071 ft.; will abandon.

Grand Saline Oil Co.'s No. 1 Carns, 200 ft. from S and W of most westerly SW cor. of 588-ac. tract in S.P.R.R. Sur., Abstract 887, 4½ miles N of Grand Saline ..... Shut down 3,520 ft.

Hartt Oil Co.'s No. 1 Dr. L. M. Cox in A. C. Night Sur., 1,735 ft. N of S line and 524 ft. E of W line ..... Derrick.

H. Helms et al's No. 1 Bogue, 647 ft. W and 155 ft. S of SE cor. of J. M. Brown 70-ac. in Marshall University Sur., SE of Van ..... Location.

B. P. Hervey's No. 1 Foster & Smith, 150 ft. S and 150 ft. W of 104-ac. tract, Margaret Neal Sur. ..... T. D. old hole is 3,708 ft.; elev. 435 ft.; top Pecan Gap 2,555 ft.; base 2,790 ft.

Howard & Dooley's No. 1 Elliott 188-ac. tract in W. H. Bundy Sur. ..... Derrick blew down.

Priest et al's No. 1 Blewitt, 175 ft. NW and SW of SE cor. of NW 84-ac. tract, E. Porter Sur. ..... T. D. 1,510 ft.

Pure Oil Co.'s No. 2 Leonard, 732 ft. from N and 200 ft. from W, Mund Gross Sur. ..... Drlg. 2,646 ft.

Pure Oil Co.'s No. 1 Browner, 250 ft. from N and 200 ft. E of most SW cor. John Walling Sur. ..... Coring 2,794 ft.

Pure Oil Co.'s No. 1 Davis, 127 ft. from S and 200 ft. from W of 139-ac. tract, Nacogdoches County School Land ..... Derrick.

Pure Oil Co.'s No. 1 Miller, 328 ft. from N and 177 ft. from E of 5-ac. tract in Mund Gross Sur. ..... Waiting on cement to set; T. D. 2,770 ft.

Pure Oil Co.'s No. 1 W. F. Swain, 220 ft. from W line and 250 ft. from N line 48-ac. tract, John Walling Sur. ..... Location.

L. B. Pruitt et al's No. 1 T. J. Luther, 50 ft. E, 170 ft. from N of SW cor. of T. J. Luther 32-acre tract, M. Gross Sur. ..... Set 10-in. csg. 144 ft.

Short et al's No. 1 B. C. Andrews, 330 ft. N and 160 ft. E of NE cor. of J. P. Farley 60-ac. tract in Margaret Nell Sur. ..... Shut down 3,635 ft.

Texas Chief Oil Co.'s No. 1 Foster, 600 ft. E of W line and 600 ft. N of S line of W. P. Foster's 151-ac. tract in F. Montgomery Sur., 7 miles south of Canton ..... Drlg. 980 ft.

The Texas Company's No. 1 W. H. White, 225 ft. E of W line and 748 ft. from N line 20-ac. tract, John Walling Sur. ..... Location.

Van Zandt Oil & Dev. Co.'s No. 1 Robinson, located NE cor. of Y'Barbo Sur., 4 miles E of Grand Saline ..... Coring 4,215 ft.

WOOD COUNTY

Big Indian Oil Co.'s No. 1 R. J. King, 450 ft. W of E line and 150 ft. N of S line of King's 109-ac. tract in Wm. Barnhill Sur. ..... Shut down 4,252 ft.; base Austin chalk 4,220 ft.

GEOLOGISTS ON TOUR

FORT WORTH, Tex., July 7.—Members of the fifth International Summer School of Geology and Natural Resources of Princeton University were banqueted in the Texas Hotel, Fort Worth, last week after a day's trip through the Van oil field in Van Zandt County, East Central Texas, as guests of the Humble Oil & Refining Co. and Pure Oil Co. The Chamber of Commerce of Fort Worth and several oil operators, especially T. T. Pendleton of the firm of Roeser & Pendleton, a former Princeton man, entertained the party while in Fort Worth.

Speakers on the program were Prof. R. M. Field, Ralph Liddell, chief geologist of the Pure Oil Co., Fort Worth; Jim McCormick, Cisco, former Princeton man, and W. K. Eshgen of the Humble Oil & Refining Co., Cisco. The party visited the West Texas fields later in the week, thence going on to the West Coast.

ODD DRILLING FLUID DIFFICULTIES AT HOBBS

(Continued from Page 33)

ple of this fluid it was found to contain 55 per cent gas, 2 per cent oil and 43 per cent mud. This represents an extreme condition, but nevertheless forcibly indicates a major cause of the mud problem at Hobbs. Gas bubbles entrapped in any drilling fluid are not any more detrimental than contamination of the mud by a much less number of detrimental drops of oil. Gas bubbles liberate more easily than oil and as the fluid is pumped down the drill stem the gas bubbles entrapped in the mud are gradually compressed, and when they are in the lower part of the hole they are compressed under such a high pressure that the weight of the mud

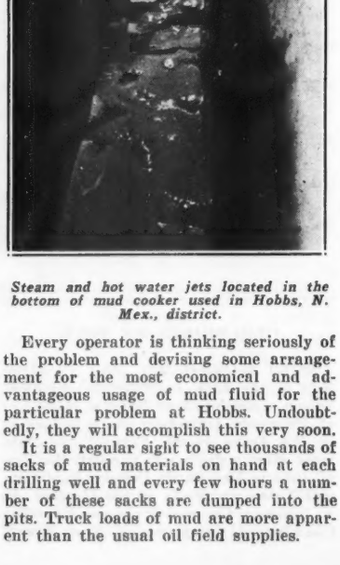
"Gunning" a mud pit in the Hobbs, N. Mex., oil field. "Aerolator" at left.

returns to very near normal. As the fluid returns up the hole the gas bubbles expand and lighten the mud in the upper part of the hole. On the other hand, oil that has become entrapped in the mud does not compress to any extent, and, consequently lightens the mud throughout the entire column in the hole. A contamination amounting to 4 per cent oil, of the total liquid part of the fluid, lessens the weight of 14-pound mud about one-half pound per gallon. This is equivalent to a considerable tonnage of weighting material per well.

The sample of drilling fluid just mentioned was taken from the pit after the fluid made one round trip from the pit to the bottom of the hole. It is quite possible that this mud, recycled again and again, would contain considerable more oil. As to the liberation of gas in gas-cut mud, it is first necessary to decrease the surface tension of the mud as much as possible, without affecting the other desirable qualities. To do this most effectively, it is necessary to obtain a thin, heavy mud of slick nature, rather than of a sticky nature. In a mud fluid weighing 14 or 15 pounds to the gallon, the fine particles of solids are so close together that even with the particles having a low water factor and high specific gravity, they will have good suspension qualities, due to that closeness. In the event that this suspension is not sufficient, then an effective suspending agent, which will do the work and at the same time not increase the percentage of solids to any great extent, should be added. Aquagel has proven to be one of the effective agents for this purpose. It is five or six times more effective in colloidal quality than most natural clays, requiring only about one-fifth as much solid matter to get the same colloidal qualities obtained with the use of clay. Also, it has a slick nature. "Mud-It" is another product aimed to give colloidal quality, and which has possible effectiveness. It is a chemical reagent and reacts chemically with the basic minerals in most muds, but samples should be tested with this product before using it, to obtain an indication whether the desired results are obtainable.

Cooling Tower Arrangements

Some operators are using cooling tower arrangements, while others are constructing long, wooden flumes to help liberate gas bubbles from the mud while it is flowing from the overflow pipe to the pit.



Steam and hot water jets located in the bottom of mud cooker used in Hobbs, N. Mex., district.

Every operator is thinking seriously of the problem and devising some arrangement for the most economical and advantageous usage of mud fluid for the particular problem at Hobbs. Undoubtedly, they will accomplish this very soon.

It is a regular sight to see thousands of sacks of mud materials on hand at each drilling well and every few hours a number of these sacks are dumped into the pits. Truck loads of mud are more apparent than the usual oil field supplies.

REDUCTIONS IN REFINERY CRUDE RUNS

(Continued from Page 32)

REFINERY OPERATIONS IN WEST TEXAS
(Plants which have been in operation during the past year)

	Daily capacity	Runs July 1	Runs June 1
Amarillo Producers & Refiners Corp., Pyote	3,000	1,500	1,500
Big Spring Refining Co., Big Spring	2,500	1,100	1,400
Big Lake Refining Co., Big Lake	2,000	(*)	(*)
Blue Bonnett Oil Refining Co., Wickett	5,000	2,000	(*)
Burford Oil Co., Pecos City	6,000	5,500	5,500
Central Texas Refining Co., Brownwood	2,000	600	600
Central Texas Refining Co., Luling	2,500	1,800	1,900
Coltex Refining Co., Colorado	10,000	6,000	6,000
Cosden Oil Co., Big Spring	15,000	9,000	8,000
Del Rio Refining Co., Del Rio	5,000	2,800	3,000
Grayburg Oil Co., San Antonio	6,000	3,000	3,000
Great West Refining Co., Big Spring	8,500	3,000	3,600
Gulf Oil & Refining Co., Sweetwater	5,000	5,000	5,000
Humble Oil & Refining Co., San Antonio	5,000	2,350	2,500
Humble Oil & Refining Co., McCamey	15,000	10,000	10,000
Magnolia Petroleum Co., Luling	3,000	2,500	2,500
Misko Refineries, Inc., Laredo	1,500	500	500
Mid-Tex Refining Co., Midland	2,500	(*)	(*)
Pecos Valley Refining Co., Pyote	10,800	9,000	10,800
Pioneer Oil & Refining Co., Somerset	8,500	(*)	(*)
Richardson Refining Co., Big Spring	1,500	900	900
Rio Grande Oil Co., El Paso	6,000	4,000	4,100
San Angelo Refining Co., San Angelo	6,000	2,500	3,000
Sweetwater Oil & Refining Co., Sweetwater	2,000	300	500
The Texas Company, San Antonio	2,000	200	200
The Texas Company, El Paso	3,000	3,000	2,500
Tonkawa Petroleum Co., Pyote	1,500	1,200	1,200
Texas Mexican Oil & Refining Co., Laredo	5,000	1,500	1,900
Texas Petroleum Products Co., Somerset	1,000	300	300
Wickett Refining Co., Wickett	1,500	900	800
Total	2,500	(*)	(*)
	150,800	80,450	78,700

*Shut down.

REFINERY OPERATIONS IN NORTH LOUISIANA
(Plants which have been in operation during the past year)

	Daily capacity	Runs July 1	Runs June 1
Bayou State Refining Co., Hosston	750	400	500
Crystal Oil Refining Corp., Shreveport	14,000	(*)	(*)
Dixie Oil Co., Superior	3,000	3,200	2,800
Louisiana Oil Refining Co., Shreveport, Bossier	24,000	17,600	18,000
Shreveport-El Dorado Pipe Line Co., Shreveport	10,000	8,000	8,800
The Texas Company, Shreveport	7,000	5,000	(*)
Total	58,750	34,200	28,950

*Shut down.

SMALL PRODUCTION GAIN AT CALIFORNIA PLANTS

(Continued from Page 139)

Production by fields—	Gas treated (thousand cu. ft.)	Natural gasoline produced (gallons)
Ventura Avenue	4,535,489	4,857,884
All other fields	18,890,424	21,580,841
Total	51,475,212	69,684,744

Production by methods— Type of plant—	Gas treated M.C.F.	Natural gasoline produced (gallons)
All absorption	42,397,574	56,514,329
Compressor	246,498	270,291
Combination comp. and oil absorption	8,921,140	12,900,124
Total	51,475,212	69,684,744
Finished gasoline prod. at plants, bbls.		24,481

Distribution—	Bbls.	Bbls.
Stocks first of month.		1,940,240
Prod. during month		1,659,161
Quantity mixed with crude or unfinished oils	205,090	
Used in blending at refineries	1,147,170	
Stocks end of month	2,197,733	
Balance*	49,408	
Total	3,599,401	3,599,401

Stocks—	Gallons
Natural gasoline held by natural gasoline plant operators	1,609,566
Natural gasoline held by refineries	90,695,220
Total	92,304,786

*Includes evaporation losses, purchases by jobbers for blending, etc.

OREGON BASIN LEASES

WASHINGTON, D. C., July 7.—The sale of oil and gas leases on approximately 1,320 acres of land in Park County, Wyoming, in the designated structures of Elk Butte and Wiley oil fields and on what is generally known as the Oregon Basin Field will be held in the office of the registrar of Local Land Office at Cheyenne, Wyo., on August 8, Department of Interior states.

The purpose of the sale is to offset drainage of adjacent lands on which there are several wells now producing. Leases will be offered separately on three units containing approximately 600, 520 and 200 acres, respectively, to the bidder of the highest bonus.

CURTAILED OPERATIONS IS MARKET FACTOR

(Continued from Page 28)

the past year including sales made last week has come from refiners located in the Chicago, Toledo and St. Louis areas. With a freight rate advantage of from 1 to 3 cents a gallon over Mid-Continent operators, the refiners located within the consuming territories are quoting delivered prices to jobbers in the states mentioned which will net around 5 cents for the U. S. Motor grade in Oklahoma. The same situation applies to kerosene, distillates and fuel oils as one or more of these products are being offered by all middle western refiners.

It is due to this condition that Oklahoma and Mid-Continent refiners have welcomed the evidence of the past week that a reduction in crude oil runs to stills was made effective the first of the month. It is hoped that this curtailment will continue until such time as the inventories have been reduced and price conditions have improved.

Mid-Continent Operations

Elsewhere in this issue is the monthly refinery report of Mid-Continent operations showing a reduction of approximately 20,000 bbls. daily in crude oil runs to stills for July when compared with June averages. While this reduction is not as large as hoped for, it does indicate that an effort is being made to bring the supply of gasoline more in line with the demand. Under normal conditions July would have witnessed a substantial increase in crude runs. With a gain of 10 per cent in demand for July and a reduced output, the end of the month should bring a better relative stock situation.

Considerable interest is being manifested among refiners as to the probable effect that the reduced crude oil purchases by refiners will have on posted crude oil schedules. Independent refiners without crude oil production are making a strong plea for schedules more in line with the deflated refinery market.

At the same time, other interests are taking the position that crude price schedules should be maintained provided the producers make the additional proration in their operations necessary to remove the excess supply. It is contended that producers through voluntary curtailment have prevented additions to crude oil inventories over the past several months and are entitled to a continuance of present posted schedules. Should this view be supported by the major companies it obviously means that refiners are faced with the necessity of abandoning their refinery prices and profitable operations being restored. It is conceded that a continuance of present conditions will mean that a few refiners will find it expedient to shut down their plants.

Gasoline and Naphtha

Some gasoline is being sold out of Oklahoma and other Mid-Continent refining groups at a price under 6 cents for the U. S. Motor grade basis Group 3. As previously explained gasoline is being sold by middle western refiners at lower levels but most Oklahoma refiners are endeavoring to sell in other territories rather than meeting this low priced competition.

The same unsettled condition applies to the high gravity gasolines. One large Mid-Continent refiner is reported to have sold over a million gallons to an export company. It is estimated that around 2,000,000 gallons of 390 and 375 endpoint gasoline were sold in Oklahoma and North Texas last week for export.

The export buyers apparently do not expect to place their orders collectively as they did in previous months at prices based on the Gulf Coast export market as posted by the membership of the Export Petroleum Association, Inc., In the past, the prices paid for 390 and 375 endpoint was 1¾ cents under the coast price. The 1¾ cents covered the freight handling charge and profit. This, in June, netted the refiners 7 cents for 390 endpoint material and 7¼ cents for 375 endpoint, basis North Texas. The export purchases of last week, however, are un-

derstood to have been made under these prices. Predictions are constantly heard that the posted export prices on both gasoline and kerosene will shortly be reduced so that they will be more nearly in line with the domestic market.

There is a fair demand for naphtha in Oklahoma. Buyers, however, are insisting on concessions in line with the gasoline market.

Natural Gasoline

Natural gasoline price trends continue downward. Manufacturers anxious to sell their July output have taken low flat prices over the month from refiners and the spot market has slumped to these levels. The demand is fair and sellers expect this situation to improve later in the month. It is pointed out that several large refiners have curtailed their refinery operations in order to reduce their gasoline stocks and will need large quantities of natural gasoline in July and August to bring this stored material up to specifications.

Grade AA was selling at a low of 4¼ cents, Grade A 4½ cents and the remaining grades 4 cents.

Kerosene

The kerosene buyer has no trouble finding bargain material. A 41-43 water white grade sold as low as 3 cents in North Texas the first of the week and was freely available in Oklahoma at 3¼ cents. The higher gravities were correspondingly low.

The demand is probably normal for this season of the year, but in the scramble to get business the general complaint is "jobbers are not buying." Many refiners have reduced their output of kerosene, throwing as much as possible in the furnace oil distillate cut. Jobbers are still anxious to work out contracts on furnace oil for the coming season, but the current spot market is slow.

Fuel Oil and Gas Oil

There is little change in the fuel oil and gas oil situation. A few sellers report some improvement in demand but this view is not general. Prices reflect softness in all grades.

Lubricants and Wax

There is practically no spot trading in Oklahoma neutral oils, steam refined stocks and bright stocks. Prices have been reduced but they are still not as low as those obtainable from coastal, middle western and Pennsylvania refiners, several of whom are pursuing a policy of getting business with little uniformity in prices. The matter of specifications complicates the steam refined and bright stock market and until there is some semblance of order in sales policies, prevailing quotations have little significance.

Except for regular customers there is little wax buying. Prices are so low and the outside demand so small that several refiners in Oklahoma and other Mid-Continent areas are out of the market.

OPEN FORUM AT OIL SHOW

Among other possibilities in connection with the 1930 International Petroleum Exposition is that of having an open forum where oil men may bring subjects for general discussion. Proration, unitization, hydrogenation and practical problems of the oil field might be brought up for informal exchange of views, it is pointed out. Views of men in the oil and gas industry concerning the value of such an open forum are being sought by W. A. Way, manager of the exposition. Mr. Way says that virtually all exhibition space has been contracted for.

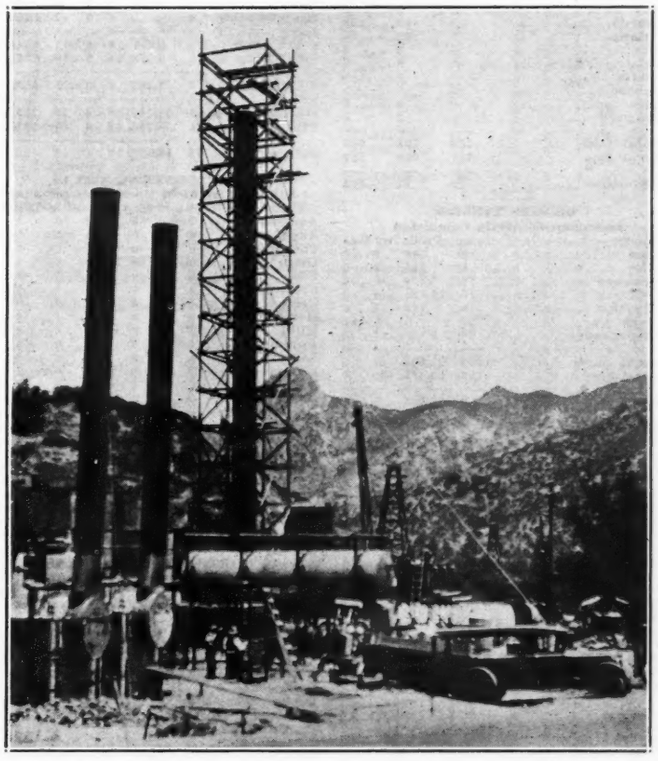
DRILLING IN NEW ZEALAND

After research extending over three years, drilling for oil has been begun by Coal Oil, Ltd., at Omata, near the port of New Plymouth, New Zealand. A party of German scientists has been operating in the district under the Elbof geophysical system and selected the site where drilling has been commenced. The equipment is capable of reaching a depth of 8,000 feet if required. The existence of a stratum of aggriomerates rendered it advisable to install a special plant for the purpose.

ERECTING REFINERY IN HISTORIC NEWHALL AREA NEAR LOS ANGELES

LOS ANGELES, Calif., July 3.—Out in the historic Newhall area of Los Angeles County, where the Standard Oil Co. of California got its start and where some of the first successful oil wells were drilled in California, a new refinery is nearing the completion stage under the direction of L. A. Whitlock, refinery and construction superintendent of the William Andrews Oil Co.

The new refinery at Newhall will have a daily rated capacity of 2,500 bbls. and should be in operation in the very near future unless something unforeseen develops, as only a few minor details remain incompleted. The refinery equipment used will permit the production of gasoline, kerosene, gas oil, lubricating oil and road oil. Crude oil for the operation of this new refinery will be supplied by the shallow Newhall Field where an aggressive but conservative campaign has been carried on by independent operators during the past several months. This recent drilling seems to have sprung up over night following a dormant period of many years and although successful, field production at Newhall has not shown any appreciable increase in spite of the fact that several good pumping wells have been completed during the past six months.



Construction under way at the Newhall refinery of the William Andrews Refining Co.

Early Refining

The erection of this new refinery at Newhall is of special significance because this area was the location of one of the first refineries in California, which, although rather crude in construction, functioned for several years. Refinery production of this plant, chiefly kerosene and fuel oil, was sold to consumers in the area adjacent to Los Angeles. Previous to this time numerous attempts had been made to refine the Newhall crude but the first practical refinery was not finished until 1876. This plant was erected by Scott & Wood near Newhall and had a capacity of approximately 20 bbls. per day. A more modern refinery was built by Scott & Morrison in 1879. The first successful producing well in the Pico-Newhall area was drilled with a spring pole in 1875 by C. A. Menter.

The discovery well was located on the axis of a steeply dipping anticline and produced about 2 bbls. of high gravity oil from around 50 feet. Production was doubled later by deepening to 75 feet and a deep hole carried down to 600 feet was good for approximately 150 bbls. per day. The success which Menter achieved attracted considerable attention with the result that he sold his interests to the California Star Oil Co. in 1876. It is interesting to note that Stewart & Hardison, who subsequently founded the Union Oil Co. of California, developed some productive acreage at Newhall along about this time and later sold it to the Pacific Coast Oil Co. in 1902, which subsequently became the Standard Oil Co. of California.

The Standard Oil Co., prompted by a desire to perpetuate California's early history, has started preliminary arrangements to preserve one of the early land marks at Newhall by restoring the old refinery in Railroad Canyon where the first successful plant was constructed. The old stills and boiler battery are still in place along with much of the brick work and old fire boxes. Since the refinery was abandoned years ago, Sycamore trees have grown up and are now towering over the ancient antiquated oil tanks and equipment. When this equipment is restored and reconstructed the trees will be removed, tangled brush cut away and a fence built around sufficient space in which to place on exhibition the curious old reminders of the first oil activities in California. On this acreage, which will be dedicated as a public park, the company will erect a replica of the first derrick and construct a spring pole drill commenorating that type of equipment used in drilling for oil in Pico Canyon.

GASOLINE MONOPOLY PROPOSED

There is under discussion a project for the creation of a government gasoline monopoly in Costa Rica.

Railroad Commission Approves Curtailment In Howard-Glasscock

FORT WORTH, Tex., July 5.—The Texas Railroad Commission has approved the proposed proration plan for the Howard-Glasscock County pools and the order went into effect on June 30.

"The entire field shall be divided into three parts, i.e., the Dora Roberts area, including the part of the entire field under proration east of the east line of Sections 132, 133 and 160, W.&N.W. Survey, Block 29; the Henshaw area, including the part of the field between the line just described and the public road along the west line of Sections 3, 6 and 7, T.&P.R.R. Survey, Block 32; and the West area, including the remainder of the field under proration.

"Wells in the Dora Roberts area and wells in the Henshaw area shall be allowed to produce 175 bbls. only of oil daily if capable of producing that amount or more. Wells not capable of producing that amount will be permitted to produce to their full capacity. Such part of the aggregate daily maximum production from the entire field, according to Rule 1, shall first be allotted to the Dora Roberts and Henshaw areas as will permit the wells therein to produce the maximum of 175 bbls. each daily, or such amount as they are capable of producing as authorized herein. The remainder of the aggregate daily maximum production from the entire field shall be allotted to the West area and all units therein whose unit and potential allowance as herein defined would not aggregate 75 bbls. daily per well, if all of the units in the West area were prorated on that basis, shall have allotted to them 75 bbls. each per well, or so much thereof as each well will produce.

"In order that equitable withdrawals from the several leases in the field my be maintained, the umpire is authorized and directed to control and designate pipe line connections, requiring pipe lines to release or make connections as may be necessary.

"The umpire shall advise each pipe line company representative of the amount of oil that is allotted each lease to which such line is connected and such pipe line is authorized to run no more oil from such lease than is so allotted. In the event an excess is run during any proration period such excess shall be deducted from the next month's allowance of the lease from which the excess was taken.

Pennsylvania Grade Crude Oil Ass'n Lays Plans for the Year

PITTSBURGH, Pa., July 8.—At today's session of the Pennsylvania Grade Crude Oil Association it was the sense of the meeting that dues be increased to expand the association's advertising program effective September 1. It was suggested that Bradford and Allegany producers pay 3 cents to the association for each barrel of crude oil produced and that all other Pennsylvania Grade producers pay 2 cents a barrel and refiners 2 cents a barrel for each barrel run to stills. Formerly all producers and refiners paid 1 cent a barrel.

Bradford producers were blamed for the present crude price structure. Representatives from that field agreed to the 3-cent dues as a penalty in addition to the 50 per cent curtailment program already under way.

Directors elected were as follows: C. L. Suhr, E. C. Breene, S. Messer, Oil City.; H. D. Atha, Logan, Ohio; Forest D. Dorn, I. H. Shearer, Earl C. Emery, Bradford; John A. Beck, Butler; Fred G. Clark, Cleveland; E. M. Lyons, Philadelphia; J. P. Flynn, Sistersville, W. Va.; David B. McCalmont, Franklin; J. D. Dinsmoor, St. Marys; and John McCoy, Marietta, Ohio.

JUNE OPERATIONS REPORT SHOWS INCREASE IN RIGS AND DRILLING

The most significant feature of the monthly field report for June is the increase in drilling operations as compared with the number of rigs and drilling wells at the close of May. A total of 921 rigs up and 3,722 wells drilling at the close of June represents an increase of 44 in rigs and 197 in wells classified as drilling, a total increase of 241.

The 2,011 completions in June represented a gain of only 5 over May, while there was an increase of 22,119 bbls. in initial production.

Following are the summaries for all producing states east of California:

SUMMARY OF ALL FIELDS
WELLS COMPLETED

	Comp.	Prod.	Dry	Gas
Eastern	403	2,155	38	56
Central Ohio	119	1,801	27	51
Lima	22	87	6	5
Indiana	25	391	10	3
Michigan	20	3,321	4	1
Kentucky	121	1,831	37	17
Illinois	20	662	6	0
Tennessee	9	0	0	0
Kansas	105	25,592	37	16
Oklahoma	387	414,510	105	34
N. C. Texas	307	12,899	171	14
E. C. Texas	26	65,000	12	0
East Texas	6	0	2	4
West Texas	60	15,938	14	0
Panhandle Texas	65	23,028	5	19
Gulf Coast	85	31,259	26	4
Southwest Texas	63	22,472	28	5
N. Louisiana	94	5,346	40	26
Arkansas	15	79	9	3
Montana	25	718	9	6
Wyoming	22	2,436	1	1
Colorado	5	250	2	0
New Mexico	5	8,735	0	1
Utah	2	0	1	1
Total June	2,011	638,560	590	276
Total May	2,006	616,441	624	213
Difference	5	22,119	34	63

Summary of Rigs and Wells Drilling

	Rigs	Drlg.	Total
Eastern	77	285	362
Central Ohio	60	194	254
Lima	2	31	33
Indiana	4	46	50
Michigan	58	108	166
Kentucky	8	162	170
Tennessee	2	11	13
Illinois	3	28	31
Kansas	60	307	367
Oklahoma	162	793	955
North Central Texas	66	382	448
East Central Texas	12	39	51
East Texas	6	11	17
West Texas	46	224	270
Panhandle Texas	43	152	195
Gulf Coast	30	219	249
Southwest Texas	93	134	227
North Louisiana	75	136	211
Arkansas	9	46	55
Mississippi	9	25	34
Alabama	2	3	5
Montana	20	78	98
Wyoming	32	111	143
Colorado	19	79	98
New Mexico	22	89	111
Utah	1	29	30
Total June	921	3,722	4,643
Total May	877	3,525	4,402
Difference	44	197	241

OKLAHOMA FIELDS
Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carter	5	989	0	0
Creek	25	705	8	4
Cotton	27	1,196	6	0
Lincoln	4	2,768	3	0
Marshall	16	797	3	0
Muskogee	27	277	15	5
Oklahoma	61	324,644	1	3
Okfuskee	12	134	6	1
Okmulgee	10	18	4	3
Osage	27	1,562	8	3
Pawnee	13	871	2	2
Payne	12	1,580	6	0
Pontotoc	10	1,474	1	0
Pottawatomie	8	9,988	0	0
Seminole	71	64,982	11	2
Stephens	16	1,030	9	0
Wagoner	11	25	5	4
Miscellaneous	32	1,470	17	7
Total June	387	414,510	105	34
Total May	316	303,203	94	27
Difference	71	111,307	11	7

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Total
Alfalfa	0	2	2
Atoka	0	1	1
Beckham	2	2	4
Blaine	0	1	1
Bryan	0	3	3
Caddo	2	12	14
Canadian	0	1	1
Cherokee	1	0	1
Coal	1	2	3
Carter	1	10	11
Cleveland	4	8	12
Comanche	2	4	6
Cimarron	0	1	1
Cotton	1	10	11
Creek	15	34	49
Garfield	0	5	5
Garvin	1	1	2
Grady	4	3	7
Greer	0	2	2
Grant	0	5	5
Harper	0	2	2
Harmon	0	1	1
Hughes	0	20	20
Haskell	0	3	3
Jefferson	0	4	4
Kay	0	8	8
Kiowa	0	2	2
Kingfisher	0	1	1
LeFlore	0	2	2
Lincoln	2	22	24
Latimer	0	2	2
Logan	1	6	7
Love	0	1	1
McIntosh	0	2	2
Marshall	2	8	10
Muskogee	10	26	36
Murray	0	1	1
Noble	1	7	8
Okfuskee	4	23	27
Oklahoma	56	299	355
Okmulgee	3	16	19
Osage	15	30	45
Pawnee	1	15	16
Payne	1	10	11
Pittsburg	0	4	4
Pontotoc	4	13	17
Pottawatomie	12	28	40
Roger Mills	0	2	2
Seminole	9	91	100
Stephens	5	13	18
Texas	0	3	3
Tulsa	0	8	8
Washita	0	1	1
Wagoner	2	7	9
Woods	0	3	3
Woodward	0	2	2
Total June	162	793	955
Total May	141	696	837
Difference	21	97	118

KANSAS FIELDS
Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Butler	9	500	6	0
Cowley	8	210	3	2
Greenwood	19	1,220	9	0
McPherson	27	20,431	4	0
Sedgwick	6	782	2	0
Stevens	11	0	0	11
Miscellaneous	25	2,449	13	3
Total June	105	25,592	37	16
Total May	108	53,295	34	6
Difference	3	27,703	3	10

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Barton	1	0	1
Butler	7	20	27
Barber	0	5	5
Chase	0	3	3
Chautauqua	1	2	3
Clark	0	1	1
Clay	0	1	1
Coffey	1	4	5
Cowley	2	12	14
Dickinson	0	3	3
Douglas	0	1	1
Edwards	2	1	3
Elk	3	4	7
Ellis	0	9	9
Ford	0	2	2
Geary	0	1	1
Greenwood	4	29	33
Gove	0	1	1
Graham	0	2	2
Grant	0	1	1
Harper	0	1	1
Harvey	1	1	2
Kiowa	0	3	3
Lyon	1	1	2
McPherson	4	33	37
Marion	2	7	9
Marshall	0	1	1
Morris	2	3	5
Morton	7	12	19
Norton	1	0	1
Pawnee	0	2	2
Pratt	0	1	1
Reno	1	6	7
Rice	2	15	17
Riley	0	2	2
Rooks	1	1	2
Rush	0	3	3
Russell	3	11	14
Saline	0	2	2
Sedgwick	3	9	12
Sheridan	0	1	1
Stafford	0	3	3
Stevens	6	8	14
Sumner	4	12	16
Trego	0	1	1
Wallace	0	1	1
Washington	0	1	1
Woodson	1	4	5
Total June	60	307	367
Total May	59	209	268
Difference	1	98	99

GULF COAST
Summary of Field Operations for June
SOUTHEAST TEXAS

	Comp.	Prod.	Abd.	Gas	Rigs	Dlg.	Ttl.
Barbers Hill—	10	11,729	1	0	4	25	29
Batson	2	0	2	0	0	1	1
Big Creek	0	0	0	0	0	2	2
Blue Ridge	3	1,035	0	0	0	4	4
Boling	0	0	0	0	2	0	2
Clay Creek	0	0	0	0	0	2	2
DeWalt	1	30	0	0	0	2	2
Esperson	2	200	1	0	1	5	6
Fannett	0	0	0	0	0	2	2
Goose Creek	1	100	0	0	0	1	1
Hankamer	1	120	0	0	1	2	3
High Island	0	0	0	0	0	2	2
Hull	1	0	1	0	0	3	3
Humble	6	3,900	1	1	1	9	10
Liberty	1	40	0	0	0	2	2
Loat Lake	0	0	0	0	0	2	2
Nash	0	0	0	0	0	2	2
N. Dayton	1	60	0	0	0	4	4
Orange	0	0	0	0	0	0	0
Orchard	2	1,550	0	0	0	2	2
Pierce J'n't'on	2	70	0	0	0	3	3
Port Neches	0	0	0	0	0	3	3
Raccoon Bend	3	959	0	0	2	4	6
Refugio	14	3,150	2	3	6	42	48
Saratoga	2	17	0	0	0	2	2
Sour Lake	0	0	0	0	0	1	1
Spindletop	7	2,428	3	0	0	8	8
Miscellaneous	5	0	5	0	2	33	35
Ttl. June	64	25,388	16	4	19	168	187
Ttl. May	98	36,813	28	3	19	160	182
Difference	34	11,425	12	1	0	8	5

SOUTH LOUISIANA

Anse La Bute	1	0	0	0	0	1	1
Bayou Bou'lon	0	0	0	0	0	2	2
Bayou Blue	1	0	1	0	1	1	2
Edgerly	2	48	0	0	0	1	1
Hackberry	5	200	3	0	1	6	7
Jennings	3	93	1	0	1	1	2
Lockport	1	280	0	0	3	4	7
Port Barre	1	50	0	0	0	4	4
Sorrento	0	0	0	0	0	0	0
Starks	0	0	0	0	0	1	1
Sulphur	1	2,000	0	0	0	3	3
Sweet Lake	0	0	0	0	0	1	1
Vinton	2	3,200	1	0	0	3	3
Miscellaneous	4	0	4	0	5	23	28
Ttl. June	21	5,871	10	0	11	51	62
Ttl. May	26	8,973	14	0	8	39	47
Difference	5	3,102	4	0	3	12	15
Ttl. Gulf Coast	85	31,259	26	4	30	219	249
Ttl. May	124	45,786	42	3	27	199	226
Difference	39	14,527	16	1	3	20	23

EAST CENTRAL TEXAS
Summary of Field Operations for June

County—	Comp.	Prod.	Abd.	Gas	Rigs	Dlg.	Ttl.
Anderson	1	0	1	0	0	4	4
Angelina	0	0	0	0	1	0	1
Cherokee	0	0	0	0	0	0	0
Delta	0	0	0	0	0	1	1
Ellis	0	0	0	0	1	0	1
Freestone	1	0	1	0	0	0	0
Grimes	0	0	0	0	0	0	0
Henderson	0	0	0	0	1	2	3
Hill	1	0	1	0	0	2	2
Hopkins	1	0	1	0	0	0	0
Lamar	1	0	1	0	0	0	0
Limestone	2	0	2	0	0	1	1
Navarro	0	0	0	0	2	2	4
Rains	0	0	0	0	0	1	1
Rusk	0	0	0	0	0	2	2
San Augustine	1	0	1	0	0	0	0
Smith	0	0	0	0	1	1	2
Van Zandt	16	65,000	2	0	6	22	28
Woods	2	0	2	0	0	1	1
Ttl. June	26	65,000	12	0	12	39	51
Ttl. May	50	53,057	22	1	4	25	29
Difference	24	11,943	10	1	8	14	22

NORTH CENTRAL TEXAS
Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Archer	49	842	30	0
Baylor	5	319	3	0
Brown	14	125	10	1
Callahan	14	62	11	1
Clay	2	45	0	0
Coleman	11	262	4	4
Comanche	4	0	3	1
Cooke	4	8	3	0
Eastland	10	243	3	3
Erath	3	0	2	1
Haskell	1	0	1	0
Jack	4	200	3	0
Montague	9	130	4	0
Palo Pinto	2	0	1	1
Shackelford	14	593	7	0
Stephens	4	13	2	0
Throckmorton	2	0	1	1
Wichita	22	757	6	0
Wilbarger	22	766	10	0
Young	111	8,524	67	1
Total June	307	12,889	171	14
Total May	334	15,739	166	17
Difference	27	2,850	5	3

Summary of Rigs and Wells Drilling

Archer	21	10	38	69
Brown	2	9	9	20
Callahan	1	3	9	13
Coleman	2	5	22	29
Cooke	1	4	4	9
Clay	0	1	3	4
Eastland	5	5	16	29
Erath	0	3	2	5
Jack	1	3	8	12
Montague	1	3	5	9
Palo Pinto	3	5	11	19
Shackelford	1	1	12	14
Stephens	1	4	12	17
Throckmorton	0	1	7	8
Wichita	3	3	18	24
Wilbarger	6	19	15	40
Young	16	23	53	92
Miscellaneous counties	2	19	14	35
Total June	66	124	258	448
Total May	88	107	263	458
Difference	22	17	5	10

WEST TEXAS
Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Brewster	1	0	1	0
Crane	3	412	0	0
Crockett	2	65	1	0
Ector	13	7,213	0	0
Fisher	1	864	0	0
Glasscock	2	2,160	0	0
Howard	1	432	0	0
Hudspeth	1	0	1	0
Irion	3	45	2	0
Jones	2	0	2	0
Loving	2	1,048	0	0
Pecos	16	1,040	2	0
Reagan	1	1,501	1	0
Reeves	2	0	2	0
Runnels	1	0	1	0
Taylor	2	125	0	0
Upton	3	220	1	0
Ward	3	301	0	0
Winkler	1	512	0	0
Total June	60	15,938	14	0
Total May	89	31,319	25	0
Difference	29	15,381	11	0

Summary of Rigs and Wells Drilling

Crane	3	0	13	16
Crockett	2	1	1	4
Ector	5	2	20	27
Fisher	1	1	4	6
Glasscock	0	4	12	16
Howard	7	5	9	21
Irion	2	4	2	8
Jones	0	0	2	2
Pecos	14	9	26	49
Reagan	0	0	9	9
Upton	2	1	2	5
Ward	2	6	8	16
Winkler	0	4	2	6
Miscellaneous counties	8	39	38	85
Total June	46	76	148	270
Total May	53	73	146	272
Difference	7	3	2	1

TEXAS PANHANDLE
Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carson	7	405	1	2
Cochran	1	0	1	0
Gray	30	21,626	2	0
Hartley	1	0	0	1
Hutchinson	10	747	1	2
Moore	2	0	0	2
Potter	1	0	0	1
Wheeler	13	250	0	11
Total June	65	23,028	5	19
Total May	73	39,386	7	17
Difference	8	16,358	2	1

Summary of Rigs and Wells Drilling

County—	Rigs	Wells shut down	Wells drlg.	Ttl.
Carson	6	8	17	31
Gray	24	8	73	106
Hutchinson	4	3	16	23
Moore	2	1	3	6
Wheeler	6	4	5	15
Miscellaneous counties	1	8	6	15
Total June	43	32	120	195
Total May	41	30	117	188
Difference	2	2	3	7

SUMMARY OF FIELD OPERATIONS
NORTH LOUISIANA

	Comp.	I.P.	Dry	Gas*	Rigs.	Drg.	Ttl.
Avoyelles	0	0	0	0	1	1	2
Bienville	1	0	0	1	0	2	2
Bossier	22	1,261	7	1	5	28	33
Caddo	11	270	5	1	8	7	15
Caldwell	0	0	0	0	0	1	1
Catahoula	0	0	0	0	0	2	2
Claiborne	0	0	0	0	0	3	3
Concordia	0	0	0	0	0	2	2
Desoto	16	100	11	4	2	10	12
East Carroll	0	0	0	0	0	1	1
Franklin	1	0	1	0	0	1	1
Jackson	0	0	0	0	0	1	1
LaSalle	2	0	2	0	0	2	2
Lincoln	0	0	0	0	0	1	1
Morehouse	1	0	0	0	1	2	5	7
Natchitoches	0	0	0	0	0	3	3
Ouachita	6	0	1	5	10	4	14
Rapides	0	0	0	0	0	1	1
Red River	0	0	0	0	1	2	3
Richland	12	0	0	12	18	18	36
Sabine	18	3,515	11	0	14	29	43
Tensas	0	0	0	0	0	1	1
Union	1	0	0	1	3	3	6
Webster	3	200	2	0	12	8	20
Total June	94	5,346	40	26	75	136	211
Total May	78	5,821	23	33	89	150	239
Difference	16	475	17	7	14	14	28

*Gas production: Bienville, 41,500,000 feet; Bossier, 2,500,000 feet; Caddo, 466,000 feet; DeSoto, 27,000,000 feet; Ouachita, 58,199,000 feet; Morehouse, 27,712,000 feet; Richland, 411,933,000 feet; total, 569,310,000 feet.

SUMMARY OF FIELD OPERATIONS
ARKANSAS

	Comp.	I.P.	Dry	Gas*	Rigs.	Drg.	Ttl.
Ashley	0	0	0	0	0	1	1
Calhoun	0	0	0	0	0	1	1
Cleburn	0	0	0	0	0	2	2
Columbia	0	0	0	0	0	3	3
Drew	0	0	0	0	0	1	1
Franklin	0	0	0	0	0	1	1
Garland	0	0	0	0	0	1	1
Grant	0	0	0	0	1	0	1
Johnson	0	0	0	0	0	3	3
Lafayette	0	0	0	0	1	0	1
Little River	0	0	0	0	0	2	2
Logan	0	0	0	0	0	1	1
Madison	0	0	0	0	0	1	1
Miller	0	0	0	0	0	1	1
Nevada	0	0	0	0	0	1	1
Ouachita	3	62	1	0	0	5	5
Pike	0	0	0	0	0	1	1
Pope	1	0	0	1	1	1	2
Scott	0	0	0	0	0	1	1
Sebastian	1	0	0	1	0	4	4
St. Francis	0	0	0	0	0	1	1

Union	10	10	8	1	6	7	13
Van Buren	0	0	0	0	0	1	1
Washington	0	0	0	0	0	4	4
White	0	0	0	0	0	1	1
Yell	0	0	0	0	0	1	1
Total June	15	72	9	3	9	46	55
Total May	7	37	5	0	10	46	56
Difference	8	35	4	3	1	0	1

*Gas production: Pope, 4,747,000 feet; Sebastian, 4,000,000 feet; Union, 50,000 feet; total, 8,797,000 feet.

SUMMARY OF FIELD OPERATIONS EAST TEXAS

	Comp.	I.P.	Dry Gas*	Rigs	Drlg.	Ttl.
Bowie	0	0	0	0	1	1
Camp	0	0	0	1	0	2
Cass	0	0	0	1	0	1
Harrison	1	0	0	1	1	2
Marion	1	0	1	0	1	1
Panola	3	0	0	3	2	3
Red River	1	0	1	0	0	2
Shelby	0	0	0	0	0	2
Total June	6	0	2	4	6	11
Total May	2	0	0	2	3	12
Difference	4	0	2	2	3	1

*Gas production: Harrison, 5,514,000 feet; Panola, 3,550,000 feet; total, 9,064,000 feet.

SUMMARY OF FIELD OPERATIONS MISSISSIPPI

	Rigs	Drlg.	Ttl.
Alcorn	0	1	1
Adams	1	0	1
Chickasaw	0	1	1
Hinds*	6	9	15
Humphreys	0	1	1
Lafayette	0	1	1
Lauderdale	1	2	3
Lincoln	0	1	1
Monroe	0	2	2
Rankin	0	4	4
Warren	0	1	1
Wilkinson	1	0	1
Yalobusha	0	1	1
Yazoo	0	1	1
Total June	9	25	34
Total May	8	19	27
Difference	1	6	7

*One dry hole.

SUMMARY OF FIELD OPERATIONS ALABAMA

	Rigs	Drlg.	Ttl.
Lamar	0	1	1
Lauderdale	1	0	1
Marion	1	0	1
Washington	0	2	2
Total June	2	3	5
Total May	2	3	5
Difference	0	0	0

SOUTHWEST TEXAS

Summary of Field Operations

	Comp.	Prod.	Dry Gas	Rigs	Drlg.	Ttl.
Dobrowolski	2	22	0	0	0	1
Pettus	2	1,600	0	0	11	1
Bruner	2	10,150	0	0	2	1
Buchanan	2	25	1	0	0	1
Lytton Spgs.	1	0	1	0	0	0
Darst Creek	12	8,740	2	0	9	2
Nursery	1	0	0	1	0	0
Mirando	23	1,935	8	2	23	31
Miscellaneous	18	0	16	2	48	97
Total June	63	22,472	28	5	93	134
Total May	82	59,891	49	2	56	114
Difference	19	37,419	21	3	37	20

TENNESSEE FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry Gas	Rgs.	Drg.	Ttl.
Putnam	0	0	0	0	0	2
Smith	1	0	0	1	0	1
Clay	0	0	0	0	2	0
Dickson	1	0	0	1	0	2
Warren	0	0	0	0	0	1
White	0	0	0	0	0	1
Morgan	6	0	0	6	0	2
Lincoln	1	0	0	1	0	2
Total June	9	0	0	9	2	11

KENTUCKY FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry Gas	Rigs	Drlg.	Ttl.
Warren	2	2	1	0	0	0
Ohio	45	968	12	8	2	50
Daviess	20	455	5	2	1	36
Hancock	1	15	0	0	0	5
McLean	7	195	3	0	0	12
Henderson	23	141	12	3	0	13
Webster	0	0	0	0	0	3
Butler	0	0	0	0	1	1
Muhlenberg	0	0	0	0	0	8
Hopkins	0	0	0	0	0	7
Christian	0	0	0	0	2	2
Breckenridge	0	0	0	0	0	1
Union	0	0	0	0	0	1
Logan	0	0	0	0	0	1
Todd	0	0	0	0	0	1
Caldwell	0	0	0	0	0	1
Cumberland	2	0	2	0	0	0
Metcalf	1	0	0	1	0	1
Wayne	1	8	0	0	0	3
Estill	0	0	0	0	0	3
Lee-Owsley	3	15	0	0	0	3
Lawrence-Johnson	10	79	0	0	0	1
Johnson-Magoffin	2	3	1	0	0	5
Floyd	0	0	0	0	0	1
Clay	2	0	1	1	2	1
Jackson	1	0	0	1	0	0
McCracken	0	0	0	0	0	1
Madison	0	0	0	0	0	1
Bell	1	0	0	1	0	0
Total June	121	1,881	37	17	8	162
Total May	94	2,336	33	5	16	139
Difference	27	455	4	12	8	23

NEW MEXICO

Summary of Field Operations

County—	Comp.	Prod.	Dry Gas	Rigs	Drlg.	Ttl.
Chaves	0	0	0	0	1	1
De Baca	0	0	0	0	2	2
Eddy	1	0	0	1	4	7
Lea	4	8,735	0	0	16	42
McKinley	0	0	0	0	2	9
Rio Arriba	0	0	0	0	0	5
San Juan	0	0	0	0	0	7
San Miguel	0	0	0	0	0	5
Torrance	0	0	0	0	1	2
Miscellaneous	0	0	0	0	2	10
Total June	5	8,735	0	1	22	88
Total May	6	72	4	0	29	80
Difference	1	8,663	4	1	7	9

COLORADO

Summary of Field Operations

County—	Comp.	Prod.	Dry Gas	Rigs	Drlg.	Ttl.
Arapahoe	1	0	1	0	0	1
Boulder	0	0	0	0	0	5
Fremont	1	80	0	0	0	13
Huerfano	1	0	1	0	1	1
Jackson	0	0	0	0	0	5
Larimer	1	15	0	0	5	4
Las Animas	0	0	0	0	1	4
Moffat	1	155	0	0	7	9
Morgan	0	0	0	0	0	2
Rio Blanco	0	0	0	0	0	2
Routt	0	0	0	0	3	0
Yuma	0	0	0	0	0	2
Miscellaneous	0	0	0	0	2	31
Total June	5	250	2	0	19	79
Total May	4	0	3	1	19	75
Difference	1	250	1	1	0	4

UTAH

Summary of Field Operations

	Comp.	Prod.	Dry Gas	Rigs	Drlg.	Ttl.
Total June	2	0	1	1	1	29
Total May	0	0	0	0	3	32
Difference	2	0	1	1	2	3

WYOMING

Summary of Field Operations

District or County—	Comp.	Prod.	Dry Gas	Rigs	Drlg.	Ttl.
Salt Creek	2	87	0	0	2	4
Big Horn	0	0	0	0	0	8
Carbon	7	70	0	0	0	12
Fremont	0	0	0	0	0	6
Hot Springs	0	0	0	0	0	3
Johnson	0	0	0	0	0	3
Lincoln	0	0	0	0	1	6
Natrona (ex. Salt Creek)	1	25	0	0	2	8
Park	1	50	0	0	9	17
Sweetwater	2	1,250	0	1	2	8
Uinta	0	0	0	0	3	12
Sublet	2	135	0	0	2	9
Weston	13	819	1	0	7	10
Miscellaneous	0	0	0	0	4	5
Total June	22	2,436	1	1	32	111
Total May	5	135	3	0	21	115
Difference	17	2,301	2	1	11	4

MONTANA

Summary of Field Operations

District—	Comp.	Prod.	Dry Gas	Rigs	Drlg.	Ttl.
Kevin-Sunburst	13	125	6	1	8	8
Pondera	1	120	0	0	1	1
Border Field	3	435	1	0	3	8
Miscellaneous	8	38	2	5	8	61
Total June	25	718	9	6	20	78
Total May	15	125	4	5	25	86
Difference	10	593	5	1	5	8

EASTERN FIELDS

Summary of Completed Work

Fields—	Comp.	Prod.	Dry Gas
Allegany	21	34	0
Bradford	184	279	0
Venango-Clarion	22	22	5
Middle Field	3	10	1
Butler-Armstrong	12	11	3
Southwest Pennsylvania	18	37	3
West Virginia	64	263	13
Southeast Ohio	79	1,499	13
Total June	403	2,155	38
Total May	413	2,057	35
Difference	10	98	3

Summary of Work Under Way

Fields—	Rigs	Drlg.	Ttl.
Allegany	6	22	28
Bradford	19	55	74
Venango-Clarion	0	20	20
Middle Field	0	3	3
Butler-Armstrong	3	5	8
Southwest Pennsylvania	1	23	24
West Virginia	20	68	88
Southeast Ohio	28	89	117
Total June	77	285	362
Total May	70	346	416
Difference	7	61	54

CENTRAL OHIO FIELD

Summary of Field Operations

	Comp.	Prod.	Dry Gas	Rigs	Drlg.	Ttl.
Ashland	16	36	6	5	3	12
Medina	4	5	0	3	0	4
Lorain	4	0	2	2	2	6
Wayne	6	9	1	4	1	6
Holmes	4	140	2	1	1	8
Cuyahoga	2	0	2	0	0	1
Ashtabula	2	0	1	1	1	2
Richland	4	0	2	2	2	2
Knox	4	4	1	2	3	6
Coshocton	1	0	1	0	0	5
Summitt	5	0	0	5	2	12
Licking	11	631	1	0	1	14
Muskingum	16	772	1	6	6	22
Athens	9	19	1	5	8	14
Meigs	6	14	0	3	6	25
Jackson	2	0	0	2	6	8
Vinton	4	3	2	0	3	6
Lawrence	2	0	1	1	2	3
Tuscarawas	7	60	0	6	2	10
Stark	1	0	1	0	1	9
Fairfield	2	0	0	2	1	2
Guernsey	4	102	1	0	8	8
Belmont	3	1	1	1	1	4
Gallia	0	0	0	0	0	1
Harrison	1	5	0	0	0	0
Scioto	0	0	0	0	0	1
Pike	0	0	0	0	0	2
Delaware	0	0	0	0	0	1
Total June	119	1,801	27	51	60	194
Total May	111	2,130	35	48	48	218
Difference	8	329	8	3	12	24

LIMA FIELD

Summary of Field Operations

	Comp.	Prod.	Dry Gas	Rigs	Drlg.	Ttl.
Wood	1	0	1	0	0	2
Hancock	1	10	0	0	0	4
Allen	4	47	0	0	0	1
Auglaize	0	0	0	0	0	1
Mercer	0	0	0	0	0	1
Sandusky	4	0	2	2	0	1
Seneca	6	1	3	2	0	6
Lucas	1	12	0	0	0	0
Ottawa	2	2	0	0	0	1
Shelby	0	0	0	0	2	0
Crawford	0	0	0	0	0	1
Logan	1	0	0	1	0	0
Hardin	2	15	0	0	0	10
Wyandot	0	0	0	0	0	1
Huron	0	0	0	0	0	1
Henry	0	0	0	0	0	1
Total June	22	87	6	5	2	31
Total May	22	129	6	8	6	30
Difference	0	42	0	3	4	1

ILLINOIS FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry Gas	Rigs	Drlg.	Ttl.
Clark	0	0	0	0	1	1
Cumberland	0	0	0	0	1	0
Crawford	5	100	1	0	1	4
Lawrence	2	220	0	0	0	3
Wabash	5	92	1	0	0	2
Clinton	0	0	0	0	0	2
Effingham	0	0	0	0	0	1
Randolph	0	0	0	0	0	3
McDonough	1	0	1	0	0	0
Madison	0	0	0	0	0	2
Edgar	0	0	0	0	0	1
Washington	0	0	0	0	0	1
St. Clair	7	250	3	0	0	8
Total June	20	662	6	0	3	28
Total May	21	337	8	0	3	33
Difference	1	325	2	0	0	5

INDIANA FIELDS

Summary of Field Operat'ons

	Comp.	Prod.	Dry Gas	Rigs	Drlg.	Ttl.
Adams	1	15	0	0	0	0
Jay	1	15	0	0	0	0
Gibson	3	0	2	1	0	4
Pike	5	175	1	1	0	11
Daviess	1	15	0	0	0	2
Sullivan	2	66	0	0	2	2
Vigo	5	95	2	0	0	2
Spencer	2	10	1	0	0	3
Perry	2	0	2	0	0	6
Warrick	0	0	0	0	0	4
Crawford	0	0	0	0	0	1
Lagrange	0	0	0	0	0	1
Johnson	0	0	0	0	0	1
Posey	0	0	0	0	0	2
Putnam	0	0	0	0	0	1
Morgan	0	0	0	0	1	2
Marshall	0	0	0	0	1	1
Monroe	2	0	1	1	0	1
White	0	0	0	0	0	1
Harrison	0	0	0	0	0	1
Lawrence	1	0	1	0	0	0
Total June	25	391	10	3	4	46
Total May	21	266	9	2	3	43
Difference	4	125	1	1	1	3

MICHIGAN FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry Gas	Rigs	Drlg.	Ttl.
Muskegon	3	55	1	0	0	7
Isabella	13	2,540	2	0	25	35
Midland	1	706	0	0	3	8
Kent	0	0	0	0	1	3
Ottawa	0	0	0	0	0	2
Oceana	0	0	0	0	0	5
Mason	0	0	0	0	0	4
Manistee	1	0	0	1	0	1
Lake	0	0	0	0	0	2
Newaygo	0	0	0	0	2	10
Cass	0	0	0	0	1	1
Tuscola	0	0	0	0	0	1
Clare	1	0	1	0	2	3
Montcalm	0	0	0	0	1	0
Alpena	0	0	0	0	0	1
Saginaw	1	20	0	0	0	1
Emmett	0	0	0	0	0	1
Eaton	0	0	0	0	1	1
Kalkaska	0	0	0	0	1	1
Branch	0	0	0	0	0	1
Iosco	0	0	0	0	2	0
Missaukee	0	0	0	0	1	0
Delta	0	0	0	0	0	1
Montmorency	0	0	0	0	1	0
Monroe	0	0	0	0	1	3
Lenawee	0	0	0	0	0	1
Gratoit	0	0	0	0	4	6
Shiawasse	0	0	0	0	0	1
Livingston	0	0	0	0	1	1
Jackson	0	0	0	0	1	0
Kalamazoo	0	0	0	0	0	1
Presque Isle	0	0	0	0	1	0
Sanilac	0	0	0	0	3	0
Allegan	0	0	0	0	2	2
Calhoun	0	0	0	0	0	1
Van Buren	0	0	0	0	2	0
Washtenaw	0	0	0	0	0	1
Sheboygan	0	0	0	0	1	0
Osceola	0	0	0	0	1	0
Mecosta	0	0	0	0	0	2
Total June	20	3,321	4	1	58	108
Total May	27	1,020	16	2	53	115
Difference	7	2,301	12	1	5	7

GENERAL ASPHALT SUES ROYAL DUTCH-SHELL

NEW YORK, July 8.—General Asphalt Co. has brought suit in British courts against Royal Dutch-Shell alleging violation of its royalty rights in the Vigas concession, one of the most important oil producing properties in Venezuela. General Asphalt, according to a statement issued by the company, originally owned the Valladares concession and obtained an option on the Vigas concession. Following a development agreement with Royal Dutch-Shell in 1913, which the company states was in effect a partnership, the properties were transferred to a holding company the equity in which was issued 75 per cent to Royal Dutch-Shell and 25 per cent to General Asphalt Co. Colon Development Co., Ltd., was organized to own and operate the Vigas concession. In 1922 in settlement of a dispute with respect to financing the Venezuelan enterprise General Asphalt and Royal Dutch-Shell entered into an agreement providing that the former receive a royalty in crude oil of 12½ per cent of all crude produced after December 31, 1922, from lands covered by the Valladares concession and 12½ per cent of 75 per cent of all crude produced on the Vigas concession, the latter royalty amounting to 9⅜ per cent. The General Asphalt statement concludes: "It was the intention of the parties that thereafter the interest of the General Asphalt Co. was to be that of a landlord instead of a partner and that without having any financial obligations it should receive royalties on oil produced according to specified percentages instead of an interest in net profits. The basis of the agreement was that a 12½ per cent royalty was the equivalent of a 25 per cent equity interest. The Valladares concession was the first developed and it is only recently that oil has been commercially produced from the Vigas concession. The Royal Dutch-Shell group has from the outset met all of its obligations with respect to deliveries of royalty oil from the Valladares concession. In excess of 2,000,000 barrels of oil have been shipped since February 1, 1930, from the Vigas concession under the group management and we are informed that deliveries are being made daily, but the group has refused to deliver any royalty or to render any accounting for the oil produced from the property, although the group obtained the property from us without other consideration than its committment as to royalty."

KETTLEMAN BILL PASSED

WASHINGTON, D. C., July 5.—The House passed the Senate bill which is intended as a conservation measure to prevent the waste of oil and gas in the Kettleman Hills oil and gas field in California and providing for co-operation and pooling operations between the Government and holders of government leases, and between lessees of oil lands in that area.

Commenting on the protest of North Dome oil operators of Kettleman Hills on pending legislation in connection with unit operation, Secretary of Interior Wilbur stated that the protest apparently refers to the original draft of the amendment to the General Leasing Act.

As passed by Congress, the two points covered in the protest were changed and the secretary believes in its present form the legislation will be satisfactory to the operators.

SIR JOHN CADMAN'S ANNUAL REPORT ON ANGLO-PERSIAN OIL OPERATIONS

NEW YORK, July 7.—Anglo-Persian Oil Co., Ltd., which reported for 1929 record earning of £5,206,761, is steadily widening its production, refining and marketing operations, and will construct what is expected to be one of the most costly pipe lines on record to transport crude from the Iraq Field to tidewater, said Sir John Cadman, president, addressing stockholders at the annual meeting held in London recently. His report follows:

The net profit for the year amounted to the record figure of £5,206,761. The balance of profit has enabled us to recommend a final dividend on the ordinary shares of 15 per cent less tax, making 20 per cent for the year, and leaving £687,064 to be carried forward.

In Persia the net production from Masjid-i-Suleiman was approximately 5,500,000 tons. Rapid strides have been made in advancing our knowledge of the new field at Haft Kel, which lies 35 miles southeast of Masjid-i-Suleiman. A structure exceeding 9 miles in length by approximately 2 miles in width, with a vertical head of oil exceeding 1,600 feet, has already been proved.

In Iraq our investment in the Iraq Petroleum Co. continues to increase with the inevitable additions of the capital required for proving and developing a modern oil field.

Transport of oil to the coast will involve the laying of what is likely to prove one of the most costly pipe lines yet constructed, since the area where the most important discovery of oil has been made, lies some hundreds of miles from the Mediterranean coast, from which alone it can find its natural outlet to the world's markets. This will mean an outlay of many millions of pounds, which can only prudently be made when reserves of oil are provided sufficient in volume not only to fill the pipe line but to transport continuously through it a quantity of oil sufficient to meet pumping costs and the interest and amortization charges on the huge expenditure anticipated. This proof is well in sight, and the policy of the Iraq Petroleum Co. is being actively directed to completing it in the most economical and efficient manner possible.

Refining

The petroleum industry as a whole is faced at times with very difficult problems arising from the fact that the natural constituents of crude oil are by no means proportionate to the market demands for each and all of them. If refining operations were confined to simple processes of distillation, there would inevitably be a large and increasing disparity between the two. To a greater or lesser extent this instability has always been present. In premotor days, petrol was practically a waste product, and was accordingly destroyed. Today the situation is entirely reversed, and were it not for the immense advances made in the processes of distillation and refining, and, above all, in cracking heavy oils into lighter products, the world demand for petrol would automatically have involved the continuous production of large excesses of other products, and besides wasteful earlier depletion of the crude would have created a problem of the first dimension.

Our refinery programs are under constant review with these considerations uppermost in mind. I do not expect ever to be able to report to you that we have reached a static condition, for the simple reason that there is nothing static in industrial science, or in the character of the market demand. We are, however, well abreast of the times, and the plant and equipment already completed, or now under construction, are capable of converting the crude oil into the constituents which the market most needs, and of insuring in almost every circumstance a complete producing equilibrium from the field to the market. At Abadan we have by successive improvements increased the spirit yield from a ton of crude oil by over 40 per cent.

The position of the Scottish shale industry has undergone little modification. We have again received no dividend on our holding of ordinary shares in Scottish Oils, Ltd. By reason of overproduction in other quarters, the market for sulphate of ammonia and paraffin wax has been seriously depressed.

The first cracking unit is now in satisfactory operation, and the proposed addition of further plant should aid in placing this industry on a more stable basis.

Sales in all markets continued to show satisfactory expansion. Prices remained remarkably stable from March onwards, and no important changes have since occurred, notwithstanding the high freight rates ruling towards the end of the year. We have continued to give the closest attention to distribution costs; much reorganization has taken place, resulting in considerable economies.

Rationalization

Good progress has been made throughout the year with the efforts to eliminate from the petroleum industry those elements which make for waste, instability and uneconomic production. I cannot too often repeat that these efforts are made as much in the interest of the public as of the industry itself. Profuse production and irregular prices bring enduring advantage to no one; this is particularly the case with petroleum. Notwithstanding the many discoveries that have been made—discoveries that have falsified the predictions of all the pessimists—it is fairly certain that the day will come when our successors will be faced with a shortage of the crude petroleum which now flows so lavishly from the earth. They will have to face the problem in their own way, and I am not suggesting that we should tighten our belt on their account. After all, the plea for conservation can be placed on too altruistic a level. There are many possibilities of waste in the actual methods of field production—waste by which a large proportion of the recoverable oil is left irretrievably in the ground owing to faulty technique and irresponsible drilling. Further, uncontrolled production, without regard to the world's capacity of economic absorption, has long been responsible for the deplorable degree of wastage and disorganization.

It has been generally recognized for a considerable time past that blind and reckless competition is at the root of these evils. It is, however, one thing to recognize the evil, another to remedy it. The diversity of interests is indeed so great that to find a complete remedy seems barely feasible, but I am glad to say that the endeavor to do so is very strongly and widely supported. I need hardly add that the board is very actively co-operating in this movement, both by example and precept.

The world demand for petroleum continues to expand. With it this company can look for parallel expansion of its business, and failing the intervention of unfavorable and unforeseen factors, all the causes I have named should contribute to another successful year.

Late Fields

(Continued from Page 40)

a total depth of 4,304 feet. It was plugged back to the Hunton lime and flowed 45 bbls. on the gauge of July 8.

Empire Oil & Refining Co.'s No. 2 Fish, S half SW NE, Section 19-7-8, on the east side of Seminole County, was completed for 22,000,000 feet of gas from the Gilcrease sand at 2,890-2,907 feet with 1,100 pounds rock pressure.

Transcontinental Oil Co. has completed a new well in the Wanette Pool in the southern part of Pottawatomie County. The well, No. 1 Miller, SE cor. NE NE, Section 22-6-3, flowed 1,688 bbls. of oil partly pinched from sand at 3,508-33 feet. It may be drilled deeper.

Production from the Wanette Pool on the gauge of July 8 was 3,699 bbls. from 11 wells, which are under a proration plan. The estimated potential production of the pool is 15,000 bbls. a day.

Production from the Oklahoma City Pool on July 8 was 79,521 bbls. from 41 wells, with 337 wells completed in the pool.

The Prairie Oil & Gas Co. and others' No. 1 Dills, SE cor. NW, Section 17-13-3w, a wildcat, was drilling at 6,640 feet with a showing of oil and about 250,000 feet of gas. The gas was believed to be from the Simpson series.

Magnolia Petroleum Co.'s No. 1 Johnson, SE cor, SW, Section 35-13-3w, another wildcat, was drilling at 6,955 feet with nothing showing.

Ryan Consolidated Petroleum Corp.'s No. 1 Lawton, NE cor. NW, Section 3-11-2w, a wildcat, east of the main pool, was drilling at 6,740 feet with cable tools in lime with nothing showing.

Mid-Kansas Oil & Gas Co. and others' No. 1 Messer, SW cor., Section 32-14-3w, west of Edmond, in Oklahoma County, a wildcat, was drilling at 5,615 feet in lime.

Over the Oklahoma County line in Cleveland County Continental Oil Co.'s No. 3 Sudik, NW cor. NE NE, Section 6-10-2w, was completed July 8, in the morning, from the Wilcox sand at a total depth of 6,692 feet. The well was estimated at 15,000 bbls. a day and 25,000,000 feet of gas.

GULF COAST

HOUSTON, Tex., July 8.—The second producer at Moss Bluff, southern Liberty County, was added Tuesday with the bringing in by the Gulf Production Co. of its No. 1 McFaddin. The well flowed initially at the rate of 1,000 bbls. daily on a half-inch choke but is being cut down to 100 bbls. daily because of limited storage facilities. It is producing from a sand at 5,760-5,831 feet but only two joints of screen were set, this being on the bottom with eight joints of blank on top. The McFaddin well is a direct north offset to Humble Oil & Refining Co.'s No. 6 Sterling, the discovery well at Moss Bluff which was completed last January flowing 864 bbls. in the first 24 hours. That well since has been shut in. The Sterling discovery well found production at a total depth of 5,666 feet. The wells are 300 feet apart. Both are on the extreme west flank of the dome.

One other test is drilling at Moss Bluff, this being Shell Petroleum Corp.'s No. 1 Herff in the extreme south side of the dome. That test at latest report was drilling shale and sand at 5,608 feet.

The Texas Company made a drill stem test of its deep wildcat test, No. 1 Ewing, Harvey N. Little Survey, near Manvel, Brazoria County. The test, the first drilled on this new geophysical salt dome prospect, has been standing for several weeks but Monday a testing tool was run into sand at 5,500-30 feet. With the tool opened 4½ minutes the drill stem filled up 48 joints of mud, 113 joints of salt water and 3 joints of sand. There was a slight odor of oil and a slight showing of gas. The hole will be deepened.

Moody-Seagraves Producing Co.'s No. 2 O'Brien, deep test at Refugio, which blew out last week while drilling at 5,670 feet, was brought under control over the week-end after dropping the drill pipe in the hole and closing the gate. Houston Oil Co.'s No. 1 Strauch, same field, which has been blowing wild since June 25, Tuesday was still out of control. It is at a total depth of 5,468 feet.

Union Sulphur Co. completed two wells at Sulphur, Calcasieu Parish, Louisiana, Nos. 60 and 61 fee. The former flowed 1,500 bbls. of 26 gravity oil at 4,858 feet and the latter 200 bbls. of fluid, 7 per cent water, at 3,346 feet. The latter oil is 19 gravity.

DEEP ROCK FURNISHES GASOLINE FOR FLIGHT

To the Deep Rock Oil Corp. goes the honor of furnishing gasoline and lubricating oil for the airplane, City of Chicago, which on July 4 established a new endurance flight record of 553 hours, 41 minutes and 30 seconds.

B. L. Majewski, vice president in charge of sales for the company, acted as manager for the flight. The plane consumed 7,630 gallons or approximately one tank car of gasoline. Four hundred gallons of Deep Rock oil were required for the flight. It is estimated that the plane traveled 41,475 miles.

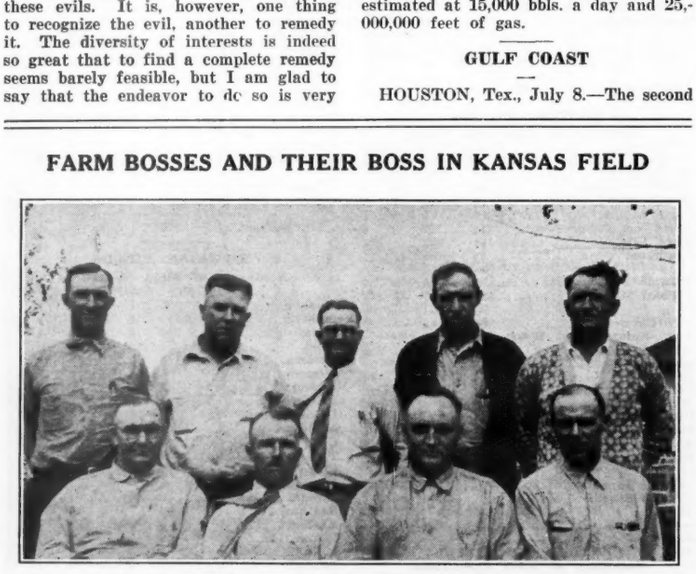
ESTONIA SHALE OPERATIONS

Estonia produced 518,000 metric tons of oil shale in 1929, compared with 446,215 tons produced in 1928, and 397,600 in 1927. The output of the state mines in 1929 was 356,000 tons, of which 167,000 tons were taken by the railways, 65,000 sold to local cement factories, 7,000 used for the operation of the mines, and 32,000 for oil production. The production of oil from shale decreased from 6,600 tons in 1928 to 4,630 in 1929. The decrease is attributed to technical difficulties and unfavorable market conditions. The production of oil from shale is expected to increase after the completion of the new plant at the government-operated mines at Kohtla.

DRILLING IN AUSTRALIA

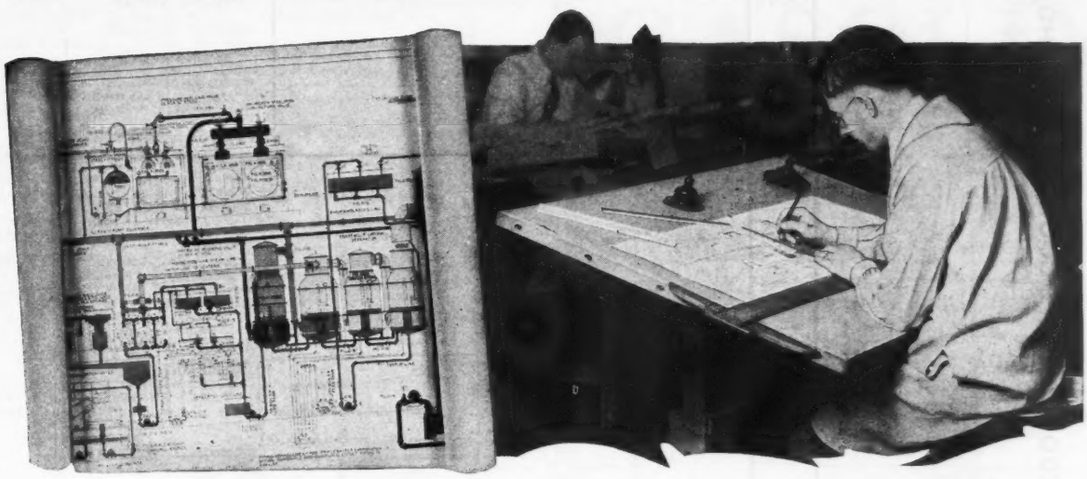
Ten companies are drilling 12 wells in Queensland, Australia. A number of petroleum permits were forfeited. Toward the end of the first quarter in 1930, considerable interest was shown in the Blythedale drilling near Roma, where small quantities of black crude were reported, the well being 3,844 feet deep.

FARM BOSSES AND THEIR BOSS IN KANSAS FIELD



When the farm bosses of the Empire Companies in the Eldorado Field met recently to talk things over with Charles Galloup, district foreman, they posed in a brisk Kansas breeze for this picture. Lower row, left to right: Ed Rutherford, Alfred Dula, Une Sanders and J. W. Flowers. Upper row, left to right: Crandall Bradbury, Paul Keeler, Charles Galloup, W. E. Baker and Ralph Kennedy.

GOULDS PUMPS



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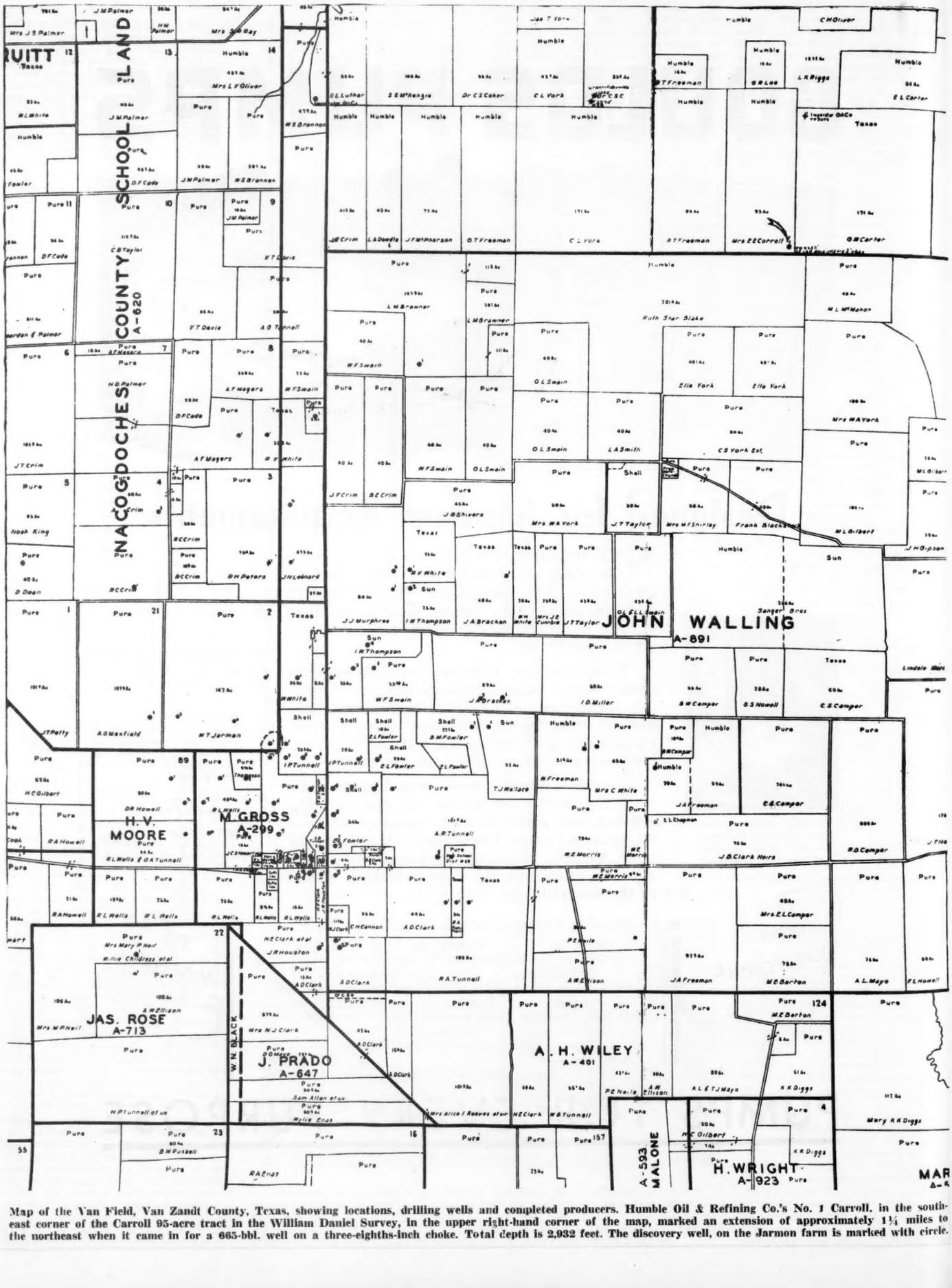
PUMPS FOR EVERY PURPOSE

MAP OF VAN FIELD, VAN ZANDT COUNTY, TEXAS



Map of the Van Field, Van Zandt County, Texas, showing locations, drilling wells and completed producers. Humble Oil & Refining Co.'s No. 1 Carroll, in the southeast corner of the Carroll 95-acre tract in the William Daniel Survey, in the upper right-hand corner of the map, marked an extension of approximately 1¼ miles to the northeast when it came in for a 665-bbl. well on a three-eighths-inch choke. Total depth is 2,932 feet. The discovery well, on the Jarmon farm is marked with circle.

WILDCAT OPERATIONS IN OKLAHOMA

(Continued from Page 42)

Green et al's No. 1 Wilson, C NE SW Sec. 14-1-12w ....Shut down 4,055 ft.

GARFIELD COUNTY

Shell Petroleum Corp.'s No. 1 Loomis, C NW NW Sec. 32-23-4w .....Drlg. 5,805 ft.
E. L. Love et al's No. 1 White, SE cor. NW Sec. 9-24-6w .....Shut down 5,580 ft.

GRADY COUNTY

J. V. Bailey's No. 1 Hubbard, C NE NW Sec. 1-10-6w ....Shut down 100 ft.
J. M. Henry et al's No. 1 Abraham, SE cor. NW Sec. 4-5-8w .....Rig.

GRANT COUNTY

Cowden et al's No. 2 Vollmer, CEL NE SW Sec. 22-25-4w. Shut down 5,640 ft.

GARVIN COUNTY

McMinn et al's No. 1 Carson, NE NW Sec. 5-3-4w .....Rig.
Nelson et al's No. 1 Strickland, NE SW Sec. 10-4-3w ....Drlg. 2,755 ft.

GREER COUNTY

I. T. I. O. et al's No. 1 fee, C SW NE Sec. 17-6-24w ....Shut down 2,290 ft.

HARMON COUNTY

Harmon-Tex Oil Co.'s No. 1 Hoadley, NE cor. Sec. 17-4-24w .....Drlg. 2,140 ft.
S. M. Stauffer's No. 1 Castleman, SW NE Sec. 8-4-26w..Shut down 625 ft.

HARPER COUNTY

Empire's No. 1 Bruce, C NE SW Sec. 12-25-20w .....Fishing 5,570 ft.
Sinclair Oil & Gas Co.'s No. 1 Howell, C SW SW Sec. 14-26-24w .....Fishing 8,583 ft.

HASKELL COUNTY

Mid-Western's No. 1 Polster, C NE SE Sec. 33-10-22 ....Drlg. 3,200 ft.
Holden's No. 1 Phillip, SE cor. Sec. 3-9-18e .....Shut down 1,860 ft.
Marion Oil's No. 1 Sanders, NW NE SW Sec. 10-9-18e ...Shut down 2,387 ft.
Sanboise Gas' No. 1 Unknown, SW NW SE Sec. 32-9-21e..Shut down 2,100 ft.

HUGHES COUNTY

Wright et al's No. 1 Ott, SE SW Sec. 15-5-11 .....Shut down 1,106 ft.
Canady et al's No. 1 Kanard, NW SW Sec. 29-9-12 .....1,000,000 ft. gas 2,284 ft.; drlg. 3,720 ft.
Irwin et al's No. 1 Jones, SE NW Sec. 30-5-10 .....Fishing 3,725 ft.

KAY COUNTY

Alco Royalty Co.'s No. 1 Wolf, SE SW SE Sec. 34-26-2w..Drlg. 2,720 ft.
Waggoner Pet. Co.'s No. 1 Hinkle, C SW NW NW Sec. 3-26-3 .....O.W.D.; abandoned 3,794-98 ft.; water.
Blankenship Petroleum Co.'s No. 1 Hansen, SW NW SW Sec. 17-27-2 .....Drlg. 2,760 ft.

KINGFISHER COUNTY

Galt Brown's No. 1 Wolf, NW SE Sec. 6-16-7w .....Shut down 6,015 ft.

KIOWA COUNTY

Merrick Oil Co.'s No. 1 Kelly, NW cor. SE Sec. 20-7-17w. Shut down 1,525 ft.

LEFLORE COUNTY

Red Bank Oil Co.'s No. 1 fee, SE SW NW Sec. 23-9-24 ..Drlg. 5,620 ft.

LATTIMER COUNTY

Linestone Oil & Gas Co.'s No. 1 Murray, NE cor. Sec. 25-5-18 .....Shut down 1,450 ft.
Limestone O. & G. Co.'s No. 1 Shaw, NW cor. NE NW Sec. 23-5-18e .....Shut down 3,250 ft.

LINCOLN COUNTY

J. J. Deaner et al's No. 1 Knox, NE NW Sec. 28-17-2....Drlg. 2,435 ft.
Atlantic Oil Prod. Co.'s No. 1 Parker, SE NW Sec. 5-14-6 .....Rig on ground.
Magnolia Pet. Co.'s No. 1 Winship, NE SW Sec. 2-13-4 ..Drlg. 3,350 ft.
Tom Slick Oil Co.'s No. 1 Hammer. SE NW NW Sec. 35-16-2 .....Drlg. 5,405 ft.

LOGAN COUNTY

Slick & Ramsey's No. 1 Jones, SE NW Sec. 24-17-2w ....Location.
Prairie and Slick's No. 1 Morgan, NW NE Sec. 33-16-1w .....Drlg. 4,936 ft.
Eason Oil Co.'s No. 1 Young, C SW NE SW Sec. 34-17-4w. Fishing 1,150 ft.

McINTOSH COUNTY

T. C. Young's No. 1 Derrison, Sec. 3-12-15 .....Abandoned 2,460 ft.
Patterson et al's No. 1 Smith, SW cor. NW SE Sec. 32-9-16 .....Shot 240 qts. 5,446-5,559 ft.; shot went off up hole; fishing.

MURRAY COUNTY

Chieftain Royalty Corp.'s No. 1 Hendrix, SW SE NW Sec. 27-2-2 .....Fishing 1,920 ft.

MUSKOGEE COUNTY

Hansen et al's No. 1 Johe, NW SW NE Sec. 12-15-18 ....Drlg. 880 ft.
H. E. Williams' No. 1 Robbins, NW SW NW Sec. 13-15-18 .....Drlg. 1,000 ft.
Sioux Oil Co.'s No. 1 Unknown, NW SE Sec. 21-11-19 ...Shut down 1,011 ft.

NOBLE COUNTY

Weaver & Craigin's No. 1 Frederick, C SW NE Sec. 4-24-1w .....Drlg. 2,020 ft.
Gypsy Oil Co.'s No. 1 Bergstrom, SE NE Sec. 28-22-1w..Drlg. 5,436 ft.

OKFUSKEE COUNTY

Henry Oil Co.'s No. 1 Harjo, Sec. 36-12-9 .....Drlg. 2,796 ft.
E. L. Robinson's No. 1 Rice, NW Sec. 2-10-9 .....Location.
Shepard et al's No. 1 Neveas, SE NW SW Sec. 3-12-10..Shut down 3,661 ft.

OKLAHOMA COUNTY

Cromwell-Franklin's No. 1 Lincoln Park, SW cor. Sec. 12-12-3w .....Drlg. 265 ft.
L. C. Hivick's No. 1 Sunset Addition, NW SW NW Sec. 17-11-3w .....Drlg. 2,810 ft.
Mid-Kansas Oil & Gas Co.'s No. 1 Messer, SW cor. Sec. 32-14-3w .....Drlg. 4,722 ft.
Prairie and Slick's No. 1 Dill, SE NW Sec. 17-13-3w ....Drlg. 6,553 ft.
Warr et al's No. 1 Castle, SW NW Sec. 20-11-3w .....Shut down 6,217 ft.
J. F. Cuniff, trustee's No. 1 Church Land, NE SW SE Sec. 17-12-4w .....Fishing 6,532 ft.
Magnolia and Ramsey's No. 1 Johnson, C NE SW Sec. 35-13-3w .....Drlg. 6,711 ft.
Ryan Consolidated's No. 1 Lawton, NE NW Sec. 3-11-2w..Drlg. 6,636 ft.
Tom Slick Oil Co.'s No. 1 Martin, C NW NW Sec. 13-13-1w .....T. D. 6,971 ft.; water; plugging back 6,871 ft.; testing at 6,600 ft.

OSAGE COUNTY

Western American Oil Co.'s No. 1, NW SE Sec. 28-23-6 ..Drlg. 1,455 ft.

PAWNEE COUNTY

L. E. Wentz' No. 1 G. Lilly, SE SW NE Sec. 26-22-3 ....Drlg. 810 ft.
Flynn & Morgan's No. 1 Jones, SW NE Sec. 22-20-5 ....Drlg. 1,000 ft.
Cochran et al's No. 1 Green, NE cor. SW Sec. 15-23-5 ....Rig.

PITTSBURG COUNTY

Empire O. & R. Co.'s No. 1 Williams, C NE SE Sec. 33-7-16e .....Fishing 3,975 ft.

POTTAWATOMIE COUNTY

The Texas Company's No. 1 Knight, SW SE Sec. 3-8-3 ..Rig on ground.

ROGER MILLS COUNTY

Bucy & Stone's No. 1 Williams, C SW Sec. 23-12-24w ..Shut down 2,245 ft.
L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w ....Shut down 2,905 ft.

SEMINOLE COUNTY

Pure Oil Co.'s No. 1 Shaffer Ashby, SE NE Sec. 22-7-5..Drlg. 2,895 ft.
T. Adkins et al's No. 1 McGilbray, SE NE Sec. 4-8-8 ...Drlg. 3,475 ft.
Magnolia and Twin State Oil Co.'s No. 1 Harns, SW NE NE Sec. 8-5-6 .....Drlg. 3,495 ft.
Sunray Oil Co.'s No. 1 Sunday, NW SE Sec. 35-5-5 .....Location.

WASHITA COUNTY

Petroleum Holdings, Inc.'s No. 1 Musie, NW cor. Sec. 10-9-20w .....Shut down 280 ft.

WOODS COUNTY

Peerless O. & G. Co.'s No. 1 Crowell, C NW NE Sec. 23-28-16w .....Shut down 6,164 ft.
Gypsy-Prairie et al's No. 1 Thompson, SE cor. SW Sec. 10-25-15w .....Shut down 6,104 ft.

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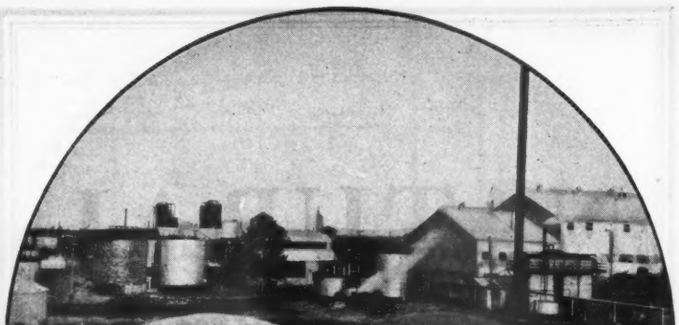

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Sinclair Oil & Gas Co.'s No. 1 Showwalter, C SW SW Sec. 33-27-16w ..... Cleaning out 6,790 ft.

WOODWARD COUNTY

Farrond et al's No. 1 Unknown, SE cor. SW SE Sec. 2-22-17w ..... Shut down 1,387 ft.
Prairie Oil & Gas et al's No. 1 Wilbur, NE cor. NW Sec. 22-23-17w ..... Drlg. 7,411 ft.
Burgoyne Brothers' No. 1 Merkins, SW cor. SE NE Sec. 15-21-19w ..... Shut down 1,910 ft.

OKLAHOMA PANHANDLE

CIMARRON COUNTY

Magnolia's No. 1 School Land, C SW NE Sec. 27-5-5 .... Drlg. 2,735 ft.

TEXAS COUNTY

Palo Alto Oil Co.'s No. 1 Graves, NE SW SW Sec. 23-2-18e ..... Spudded; shut down.

SOUTHERN OKLAHOMA

ATOKA COUNTY

Bryant-Croxton's No. 1 Mason, NW SE NW Sec. 4-1s-14.. Shut down 1,850 ft.
Brookshire's No. 1 Guinn, NW cor. Sec. 18-3s-10 ..... Shut down 100 ft.

BRYAN COUNTY

Bush et al's No. 1 Commerce Trust, NE cor. Sec. 35-6s-9 ..... Shut down 525 ft.
Johnson et al's No. 1 Ussery, SE SW SE Sec. 14-16s-7e .. Drlg. 400 ft.
Marshall's No. 2 fee, C SW SE NW Sec. 26-5s-7 ..... Shut down; 6-in. csg. 265 ft.

CARTER COUNTY

Campen-Lasater Co.'s No. 1 Anderson, NE cor. SE NE SE Sec. 32-4s-2 ..... Shut down 2,590 ft.

CHOCTAW COUNTY

Choctaw Petroleum Co.'s No. 1 Wilson, SW cor. SW Sec. 15-6s-19e ..... Shut down 1,346 ft.

COMANCHE COUNTY

Pelwin Oil Co.'s No. 1 Tafepirdy, C NW NE NE Sec. 5-1s-9w ..... Drlg. 1,826 ft.

COTTON COUNTY

H. J. Dillard's No. 1 McMillan, SE NW Sec. 2-4s-13w.... Location.

LOVE COUNTY

Hobbs et al's No. 1 Roberts, NE cor. SW Sec. 20-6s-3w .. Drlg. 3,130 ft.
Gilcrease Oil's No. 1 Burkhart, NE NW Sec. 13-6s-1 .... Rig.

MARSHALL COUNTY

Pace et al's No. 1 Hicks, SW NW Sec. 8-6s-7 ..... Drlg. 390 ft.
Walker et al's No. 1 Parks, NW NE NW Sec. 5-5s-5 .... Drlg. 650 ft.
McCrory et al's No. 1 Adams, NE SW SE Sec. 31-7s-6 .... Rig.
Akers et al's No. 1 Spicer, SW SE SE Sec. 33-5s-7e .... Drlg. 370 ft.

McCURTAIN COUNTY

Milton et al's No. 1 Vase, SW NW Sec. 26-6s-21 ..... Shut down 2,287 ft.

STEPHENS COUNTY

R. Southard's No. 1 McKinney, NE cor. Sec. 25-1-8n .... Shut down 1,060 ft.
Wirt Franklin Petroleum Corp.'s No. 1 McPhail, NW SE Sec. 1-2s-7w ..... Total depth 4.529 ft.; to test.

WILDCAT OPERATIONS IN KANSAS

(Continued from Page 44)

EDWARDS COUNTY

Dixie and Amerada's No. 1 McCarty, SW cor. Sec. 22-25-17w ..... Water 4,647-90 ft.; shut down 5,-100 ft.; plugging back to 4,452-92 ft.

ELLIS COUNTY

Central Commercial Oil Co.'s No. 1 Helms, SE cor. NE Sec. 2-12-20w ..... Drlg. 2,850 ft.
Streeter & Stearns' No. 1 Leiker, SW NE Sec. 26-13-20w. Shut down 3,303 ft.
Byrene et al's No. 1 Fisher, NW SE Sec. 4-11-20w ..... Shut down 1,000 ft.
Rush Oil Co.'s No. 1 Gatewood, NW cor. NW Sec. 4-15-20w ..... Drlg. 3,665 ft.

ELK COUNTY

Croft & Frazier's No. 1 Keys, SE NE Sec. 26-31-10 .... Rig.

ELLSWORTH COUNTY

Slick et al's No. 1 Unknown, NW cor. Sec. 25-17-10w .... Rig on ground.

FORD COUNTY

McNabb et al's No. 1 Fowler, C SE Sec. 26-27-22w .... Shut down 400 ft.
Swain et al's No. 1 Kenthorne, C NW Sec. 21-25-24w .... Drlg. 3,575 ft.

GOVE COUNTY

Varelius & Baucher Oil Co.'s No. 1 Todd, NW cor. Sec. 24-13-27w ..... Drlg. 1,295 ft.

GRAHAM COUNTY

Gulf Coast Oil Co.'s No. 1 Johnson, C S half Sec. 27-8-25w. Shut down 4,340 ft.
Naylor et al's No. 1 St. John, NW SE SE Sec. 27-8-25w.. Drlg. 4,370 ft.

GRANT COUNTY

McKenna et al's No. 1 Sullivan, NE cor. Sec. 12-29-38w.. Shut down 50 ft.

GREENWOOD COUNTY

Staats et al's No. 1 Swan, NE NW Sec. 3-25-12 ..... Rig.
Mid-Continent Pet. Corp.'s No. 1 Griss, NW SW Sec. 33-25-13 ..... Rig.
Harwood Oil Co.'s No. 1 Log, SW NE Sec. 20-25-10 ..... Rig.
Mallory's No. 1 Denchfield, SE NW Sec. 12-27-9 ..... Drlg. 1,810 ft.
Bundy, Smith & O'Neil's No. 1 Ford, NE NW Sec. 28-25-13 ..... Shut down 50 ft.
F. Konkay et al's No. 1 Rock, NW NE NE Sec. 7-27-12.. Shut down 1,836 ft.

HARPER COUNTY

Beeler et al's No. 1 Bear, C NE Sec. 21-31-6w ..... Shut down 1,830 ft.

KIOWA COUNTY

Phillips-Prairie's No. 1 Bean, NE SE Sec. 10-30-17w .... Drlg. 2,385 ft.
McKenna et al's No. 1 Raison, C NE Sec. 14-28-20w .... Rig.

LYONS COUNTY

Griffith et al's No. 1 King, NW cor. Sec. 8-19-10 ..... Rig.
Sheedy et al's No. 1 Pyle, NE cor. Sec. 1-20-10 ..... Abandoned 2,110-14 ft.; water.

MARION COUNTY

Magnolia Pet. Co.'s No. 1 Davis, SE NW Sec. 18-21-2 .... Rig.
Dixie and Arkansas Fuel's No. 1 Hacker, NW NE Sec. 6-17-1 ..... Spudding.
Empire Oil & Ref. Co.'s No. 1 Hiebert, SE SW SE Sec. 20-20-2 ..... Drlg. 2,600 ft.
Marshall et al's No. 1 Higgins, NE cor. Sec. 33-19-5 .... Rig.

MARSHALL COUNTY

Swicker & Sincox's No. 1 Remple, C N half NW Sec. 22-4-9 ..... Shut down 1,000 ft.
Brazier et al's No. 1 Runkel, SE NW Sec. 13-2-6 ..... Shut down 50 ft.

McPHERSON COUNTY

Simmons & Canary's No. 1 Bishop, NW SW Sec. 15-18-1w ..... Drlg. 2,090 ft.
Harry Skelly et al's No. 1 Neufeldt, SE NE Sec. 19-21-3w ..... Rig.
Milmac's No. 1 Decker, NW cor. Sec. 11-20-3w ..... Drlg. 3,525 ft.

MIAMI COUNTY

Clark's No. 1 Vaughn, SE SW Sec. 28-17-22w ..... Drlg. 1,200 ft.

MORTON COUNTY

Argus Prod. Co.'s No. 1 Morgan, C NW Sec. 8-33-39w.... Rig on ground.
McNabb et al's No. 1 Rickart, C SE Sec. 5-35-39w ..... Drlg. 2,250 ft.
Argus Prod. Co.'s No. 2 Chambers, C SE Sec. 21-34-39w .. Rig.
Argus Prod. Co.'s No. 1 Mangels, C NW Sec. 4-34-39w... Drlg. 2,592 ft.
Argus Prod. Co.'s No. 1 Tillet, C SW Sec. 21-34-39w ..... Rig.
Argus Prod. Co.'s No. 1 Sullivan, C NW Sec. 29-34-39w ... Rig.
Argus Prod. Co.'s No. 1 Burton, C SE Sec. 11-33-40w ..... Location.
Argus Prod. Co.'s No. 1 Mangels, C SE Sec. 4-33-39w ..... Drlg. 2,484 ft.
Argus Prod. Co.'s No. 1 Morgan, C SW Sec. 6-33-39w .... Location.
Argus Prod. Co.'s No. 1 Mangels, C SW Sec. 19-33-39w ... Drlg. 2,552 ft.
Argus Prod. Co.'s No. 1 Mangels, C NE Sec. 20-33-39w ... Spudding.
Argus Prod. Co.'s No. 2 Haywood, C NW Sec. 31-33-39w ... Drlg. 2,575 ft.
Argus Prod. Co.'s No. 1 Garner, C SE Sec. 18-33-39w .... Location.
Argus Prod. Co.'s No. 1 Dreibelbis, C NE Sec. 9-34-39w .. R.U.S.T. 2,545 ft.

Argus Prod. Co.'s No. 1 Little, C SE Sec. 24-34-40w ..... Comp. 2,572-2,892 ft.; 7,500,000 ft. gas.
Argus Prod. Co.'s No. 1 Watson, C NE Sec. 27-34-40w .... Rig.
Argus Prod. Co.'s No. 1 Thompson, C SW Sec. 7-34-39w .. Drlg. 2,584 ft.
Argus Prod. Co.'s No. 1 Rolla State Bank, C NW Sec. 8-34-39w ..... R.U.S.T. 2,560 ft.
Argus Prod. Co.'s No. 1 Hayward, C SW Sec. 9-34-39w ... Drlg. 2,500 ft.
Argus Prod. Co.'s No. 1 Thompson, C NW Sec. 18-34-39w. Drlg. 600 ft.
Argus Prod. Co.'s No. 1 Darth, C NE Sec. 20-34-39w ..... Shut down 1,804 ft.
Argus Prod. Co.'s No. 1 Chambers, C NW Sec. 25-32-40w.. R.U.S.T. 2,543 ft.
Hydraulic Oil Co.'s No. 1 State Land, NW SE Sec. 22-24-43w ..... Drlg. 1,570 ft.

MORRIS COUNTY

Henderson et al's No. 1 Selsman, SW SE Sec. 24-16-9 .. Rig.
Urschell et al's No. 1 Scott, NE NW Sec. 6-16-6 ..... Drlg. 2,300 ft.

OSAGE COUNTY

Riggs & Smith's No. 1 Wood, SE NW Sec. 21-14-15 .... Drlg. 200 ft.

PAWNEE COUNTY

Skelly Oil Co.'s No. 1 Milhouse, C SE Sec. 34-23-17w .... Drlg. 4,456 ft.

PRATT COUNTY

Wilcox O. & G. Co.'s No. 1 Bappin, SW NW Sec. 7-26-15w ..... Drlg. 3,990 ft.

RENO COUNTY

E. L. Study and H. L. Turner's No. 1 Haury, NE SW Sec. 1-23-4w ..... Drlg. 1,020 ft.
Phillips Pet. Co. and Tom Palmer's No. 1 Harsch, NE SE Sec. 14-26-5w ..... Drlg. 2,515 ft.
United Pet. Co.'s No. 1 Houston, NW cor. Sec. 4-22-10w.. Spudded; shut down.
C. A. Cheney and M. M. Valerius' No. 1 Stevens, C NE SE NE Sec. 6-26-7w ..... Drlg. 3,445 ft.

RICE COUNTY

Gypsy Oil Co.'s No. 1 Koch, SE NE NW Sec. 35-20-9w.... Rig on ground.
Hershey Golden & Skelly's No. 1 Brandenstein, Sec. 10-19-10w ..... Rig on ground.
McPherson and Shell's No. 1 Jennings, NE SW NW Sec. 29-18-6w ..... Drlg. 2,600 ft.
Miller & Brown's No. 1 Schartz, Sec. 14-20-10w ..... Shut down 2,380 ft.
Hoffner, Lee & Shell's No. 1 Siad Farm Corp., C SW Sec. 33-19-6w ..... Fishing 2,020 ft.
Tatlock et al's No. 1 Ploog, C SW SE Sec. 33-18-9w .... Fishing 2,200 ft.
Danciger et al's No. 1 Bell, C SW Sec. 16-19-8w ..... Shut down 3,498 ft.
McCulloch et al's No. 1 Williams, C NE Sec. 35-20-8w ... Shut down 3,600 ft.

ROOKS COUNTY

A. H. Kruger's No. 1 Steis, NW SE SW Sec. 12-9-16w .. Shut down 570 ft.
Streater-Stearn's No. 1 Conger, SE NW NE Sec. 16-10-16w ..... Rig.

RUSH COUNTY

Prairie et al's No. 1 Lecker, NW SW SW Sec. 5-16-18w.. Location.
Syndicate Oil Co.'s No. 1 Lannen, C SW Sec. 11-18-16w .. Location.
McPherson O. & G. Co.'s No. 1 Brack, C NW Sec. 24-17-16w ..... Drlg. 1,135 ft.
Syndicate Oil Co.'s No. 1 Mohr, C SW Sec. 2-18-16w .... Drlg. 1,047 ft.
Danciger Oil & Refining Co.'s No. 1 Nave, NW cor. Sec. 26-17-17w ..... Total depth 3,606 ft.; shut down.

RUSSELL COUNTY

Streater & Stearns' No. 1 Mitchell, SE cor. Sec. 6-15-14w.. Rig.
Empire O. & R. Co.'s No. 1 Herbel, NW NE SW Sec. 26-14-14w ..... Spudding.
Slick et al's No. 1 Berrick, SE SW Sec. 23-15-13w ..... Drlg. 2,025 ft.
Empire and Prairie's No. 2 Ochs, SE NE Sec. 23-15-14w.. Drlg. 2,200 ft.
Austin Drlg. Co.'s No. 1 Rochfellow, SE cor. Sec. 6-13-12w ..... Drlg. 650 ft.
Imo O. & G. Co.'s No. 1 Wambley, SE NW NE Sec. 7-14-14w ..... Shut down 3,328-30 ft.; water.
Gilbreath et al's No. 1 Bratton, C NE Sec. 33-11-13w ... Shut down 1,010 ft.

SEDGWICK COUNTY

Newman et al's No. 1 Bawly, SE NW NE Sec. 2-27-2 .... Drlg. 1,065 ft.
Tavender et al's No. 1 McLean, SE SW SE Sec. 23-26-1w ..... Shut down 975 ft.

SALINE COUNTY

Twin Mounds Oil Co.'s No. 1 Weis, C W half NE NW Sec. 20-13-4w ..... Shut down 1,725 ft.
Dixie Oil Co.'s No. 1 Miller, NE SE SE Sec. 9-16-3w .... Drlg. 3,325 ft.

SHAWNEE COUNTY

Jenkins & Scott's No. 1 Sherman, NW NE Sec. 28-10-15 ..... Shut down 985 ft.

STAFFORD COUNTY

Boucher Oil's No. 1 Christenson, NW cor. Sec. 22-22-11w.. Drlg. 2,160 ft.
Boucher Oil's No. 1 Groves, NE cor. Sec. 9-22-11w ..... Fishing 2,050 ft.
Midwest's No. 36 Richardson, SE cor. Sec. 36-22-12w .... Drlg. 2,757 ft.

STEVENS COUNTY

McNabb and Mid-Kansas' No. 1 Rhinehart, C NE Sec. 23-32-39w ..... Rig.
Barrington et al's No. 1 Creamer, C NW Sec. 2-35-39w.. Drlg. 1,350 ft.
Argus Prod. Co.'s No. 1 Irwin, C SE Sec. 10-35-39w ..... Rig.
Argus Prod. Co.'s No. 1 Ratcliff, C SE Sec. 8-33-37w .... Spudding.
McNabb et al's No. 1 Porter, Sec. 4-31-37w ..... Rig.
Argus Prod. Co.'s No. 1 Shaffer, C SE Sec. 6-35-38w .... Rig.
Argus Prod. Co.'s No. 1 Stone, C NE Sec. 3-33-39w ..... Drlg. 2,400 ft.
Agate Oil Co.'s No. 1 Gregory, NW SE Sec. 19-33-38w ... Shut down 2,135 ft.
Argus Prod. Co.'s No. 1 Libon, C NE Sec. 2-34-39w ..... Total depth 1,704 ft.; lost hole; drlg. 200 ft. new hole.
Argus Prod. Co.'s No. 3 Armstrong, C SE Sec. 3-34-39w .. Comp. 2,581-2,896 ft.; 7,000,000 ft. gas.
Argus Prod. Co.'s No. 1 Roach, C NE Sec. 34-32-38w .... R.U.S.T. 2,825 ft.
Argus Prod. Co.'s No. 1 Asher, C NW Sec. 7-35-37w ..... Comp. 2,607-2,902 ft.; 5,000,000 ft. gas.
Mangle et al's No. 1 Youngren, C SE NW Sec. 24-32-39w ..... Spudding; shut down.
W. Sidwell et al's No. 1 Kelly, SW cor. NE Sec. 16-34-38w ..... Shut down 1,600 ft.

SUMNER COUNTY

Magnolia Pet. Co.'s No. 1 Shriver, NW SW Sec. 9-33-2 .... Drlg. 660 ft.
Disney et al's No. 1 Fay, C E half SE Sec. 14-34-1w .... Rig.
Davidson et al's No. 1 Strickland, SW cor. SE Sec. 12-35-1w ..... Rig.

WASHINGTON COUNTY

Sincox et al's No. 1 Penwell, NW SE NE Sec. 16-3-3 .... Drlg. 240 ft.

WOODSON COUNTY

Sheedy et al's No. 1 Reed, SW SE SW Sec. 26-23-14 .... Shut down 1,595 ft.

WILDCAT OPERATIONS IN NEBRASKA

FRANKLIN COUNTY

U. R. Drlg. Co.'s No. 1 Brunkle (twin well), C NW SW NE Sec. 2-3n-13w ..... Rig.

CHASE COUNTY

Chase Pet. Co.'s No. 1 Ingold, C NE Sec. 24-6n-38w .... U. R. 5-in. csg.; T. D. 4,265 ft.

FURNAS COUNTY

Southwestern Pet. Corp. of Nebraska's No. 1 Montague, SE SW NW Sec. 28-1n-22w ..... Shut down 1,750 ft.
Graham Bros.' No. 1 Edwards, NW SW Sec. 13-2n-22w.. Shut down 3,250 ft.

PHELPS COUNTY

Trees Oil's No. 1 Bergan, Sec. 22-6-19w ..... Rig on ground.

RICHARDSON COUNTY

Norton et al's No. 1 Albin, NE cor. Sec. 26-1-14 ..... Miss. lime 2,200 ft.; landing 8-in. casing.

ROCK COUNTY

North Central Dev. & Drlg. Co.'s No. 1 Leonard, SE cor. NE Sec. 14-32-18w ..... Drlg. 900 ft.

WEBSTER COUNTY

Mid-Kansas Exploration Co.'s No. 1 Platt, C SE one-half Sec. 2-1n-11w ..... Shut down 555 ft.

54,621 FEET
OF STRUCTURE DRILLING COMPLETED
!

The above illustration shows one of six drills operated by Longyear crews on a large contract for oil structure drilling in Central Kansas. This recently completed job consisted of 162 holes with a total of 54,621 feet of drilling.

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have been used for steam boilers for 25 years and are now being used by leading oil companies for indicating oil levels in tanks, towers, stills, etc.

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The *oil* shows BLACK

They are safe and durable at the highest pressures and temperatures. We can furnish gages for every type of service. Full information upon request.

JERGUSON GAGE & VALVE CO.

MYSTIC AVE. AND NORTHERN ARTERY
SOMERVILLE, MASS.

NEW AND CORRECTED LOCATIONS IN FIELDS OF TEXAS PANHANDLE

TEXAS PANHANDLE
Week ending June 25
Carson County

Reiger & Stekol's No. 1 W. B. Martin and others, 330 feet south and east of the NW cor. of the SW of Section 90, Block 7, I.&G.N. The Texas Company's No. 1 C. R. Garner and others-B, 330 feet south and west of the NE cor. of the W half of Section 93, Block 4, I.&G.N.

Empire Gas & Fuel Co.'s No. 4 W. H. Fuqua, 330 feet north and west of the SE cor. of the NW of Section 6, Block S, H.&G.N. McMan Oil & Gas Co.'s No. 3 F. E. Percival, 990 feet south and 330 feet east of the NW cor. of the W half of the NE of Section 199, Block 3, I.& G.N. Texas Interstate Pipe Line Co.'s No. 2 S. B. Burnett, at the C of the NE of Section 77, Block 5, I.&G.N. Same company's No. 2 J. M. Sanford, at the C of the SE of Section 14, Block 3, A.B.&M.

Gray County

F. E. Smith's No. 1 J. S. Morse, 200 feet from north and 330 feet east of the SW cor. SW SW, Section 6, Block 26, H.&G.N. Tedesco Oil Co. and Bell Oil & Gas Co. and others' No. 1 J. S. Morse, 330 feet south and east of the NW cor. NE SW, Section 1, Block 26, H.&G.N. Empire Gas & Fuel Co.'s No. 1 W. E. Crow, 875 feet south and 330 feet east of the NW cor. NE, Section 137, Block 3, I.&G.N. Humble Oil & Refining Co.'s No. 6 Combs & Worley, 285 feet south and 330 feet west of the NE cor. N half SE, Section 36, Block 3, I.&G.N. Same company's No. 7 Combs & Worley, 330 feet south and 990 feet west of the NE cor. N half SE, Section 36, Block 3, I.&G.N. Same company's No. 8 Combs & Worley, 330 feet south and 990 feet east of the NW cor. N half SE, Section 36, Block 3, I.&G.N.

Barker & Bourland's No. 1 W. P. Dial, 330 feet south and west of the NE cor. of the N half of the NW of Section 48, Block 25, H.&G.N. Camel Oil Co.'s No. 4 W. W. Harrah-B, 990 feet south and 330 feet west of the NE cor. of the NE of Section 150, Block 3, I.&G.N. Cockrell-McIlroy Oil Co.'s No. 1 H. Horner, 330 feet north and west of the SE cor. of the NE of Section 139, Block 3, I.&G.N. Empire Gas & Fuel Co.'s No. 1 W. C. Archer-C, 330 feet south and east of the NW cor. of the N half of the SW of Section 139, Block 3, I.&G.N. Same company's No. 2 J. G. Noel, 330 feet south and west of the NE cor. of the SE of Section 151, Block 3, I.&G.N. Same company's No. 2 Mrs. A. C. Shields, 330 feet south and west of the NE cor. of Section 151, Block 3, I.&G.N. Humble Oil & Refining Co.'s No. 4 Combs & Worley, 330 feet north and 990 feet west of the SE cor. of the N half of the SE of Section 36, Block 3, I.&G.N. Same company's No. 5 Combs & Worley, 330 feet north and 990 feet east of the SW cor. of the N half of the SE of Section 36, Block 3, I.&G.N. Jewel Oil Co.'s No. 1 W. W. Harrah, 330 feet south and east of the NW cor. of the west 40 acres of the south 120 acres of the east 240 acres of Section 163, Block 3, I.&G.N. Southern Petroleum Exploration Co.'s No. 2 J. G. Noel, 330 feet south and east of the NW cor. of the W half of the NW of Section 138, Block 3, I.&G.N. The Texas Company's No. 8 Combs & Worley, 330 feet south and 990 feet west of the NE cor. of the S half of the SE of Section 36, Block 3, I.&G.N. Same company's No. 9 Combs & Worley, 330 feet south and 990 feet east of the NW cor. of the S half of the SE of Section 36, Block 3, I.&G.N. Same company's No. 1 W. W. Harrah, 330 feet north and west of the SE cor. of the SE of Section 150, Block 3, I.&G.N.

Panhandle Refining Co.'s No. 5 G. H. Saunders, 990 feet south and 330 feet east of the NW cor. E half NE, Section 3, Block 1, A.C.H.&B. Survey. Cockrell-McIlroy Oil Co.'s No. 1 F. L. Allam, 330 feet south and west of the NE cor. E half NE, Section 127, Block 3, I.&G.N. Survey. Same company's No. 2 W. M. Castleberry, 330 feet north and east of the SW cor. SE, Section 126, Block 3, I.&G.N. Survey. Derosa Oil & Gas Co.'s No. 2 J. M. Saunders, 330 feet north and west of the SE cor. E half NW, Section 40, Block 3, I.&G.N. Survey. Dixon Creek Oil Co.'s No. 3 W. W. Harrah, 330 feet north and west of the SE cor. SE NE, Section 150, Block 3, I.&G.N. Survey. McIlroy Oil Co.'s No. 3 W. C. Archer, 990 feet south and 330 feet east of the NW cor. NW, Section 139, Block 3, I.&G.N. Survey. McIlroy Oil Co.'s No. 4 W. C. Archer, 330 feet north and east of the SW cor. NW, Section 139, Block 3, I.&G.N. Survey. Prairie Oil & Gas Co.'s No. 1 D. W. Carey, 330 feet south and 372 feet east of the NW cor., Section 114, Block 3, I.&G.N. Survey. The Texas Company's No. 2 W. W. Harrah, 330 feet south and west of the NE cor. SE, Section 150, Block 3, I.& G.N. Survey. Same company's No. 3 W. W. Harrah, 330 feet south and east of the NW cor. SE, Section 150, Block 3, I.&G.N. Survey. W. B. Wild and others' No. 1 L. M. Harrah, 330 feet south and west of the NE cor. SW, Section 150, Block 3, I.&G.N. Survey.

Andrus and others' No. 1 J. H. Hill, 330 feet north and 285 feet west of the SE cor. of the N half of the SE of Section 9, Block 3, B.&B. Nabob Oil Co.'s No. 3 J. S. Morse-A, 990 feet north and west of the SE cor. of Section 68, Block 25, H.&G.N. Champlin Refining Co.'s No. 4 D. J. McLaughlin, 990 feet north and 330 feet west of the SE cor. of the NE of Section 33, Block B-2, H.&G.N. Continental Oil Co.'s No. 1 C. Wright, 330 feet north and east of the SW cor. of the NW of Section 13, Block 3, I.& G.N. Danciger Oil & Refining Co.'s No. 8 H. K. Beck, 990 feet north and 330 feet east of the SW cor. of the NW of Section 28, Block B-2, H.&G.N. Delmar Oil Co.'s No. 1 A. Smith, 330 feet north and east of the SW cor. of the SE of Section 139, Block 3, I.&G.N. Delmar Oil Co.'s No. 2 A. Smith, 330 feet south and west of the NE cor. of the SE of Section 139, Block 3, I.&G.N. Magnolia Petroleum Co.'s No. 5 W. W. Harrah, 330 feet north and west of the SE cor. of the NW of Section 150, Block 3, I.&G.N. Same company's No. 9 J. B. Bowers, 330 feet north and west of the SE cor. of the NW of Section 63, Block B-2, H.&G.N. Phillips Petroleum Co.'s No. 2 J. B. Bowers, 330 feet south and west of the NE cor. of the E half of the SW of Section 63, Block B-2, H.&G.N. Same company's No. 3 Combs & Worley (Foxx), 330 feet north and west of the SE cor. of the W half of the NE of Section 36, Block 3, I.&G.N. Same company's No. 5 J. E. Wright (Wood), 330 feet south and east of the NW cor. of the N half of the SW of Section 13, Block 3, I.&G.N. Prairie Oil & Gas Co.'s No. 1 Combs & Worley (V. Moody), 285 feet north and 330 feet west of the SE cor. of the E half of the NE of Section 36, Block 3, I.&G.N. Prairie Oil & Gas Co.'s No. 2 Combs & Worley (V. Moody), 330 feet north and east of the SW cor. of the E half of the NE of Section 36, Block 3, I.&G.N. The Texas Company's No. 16 J. B. Bowers, 330 feet north and east of the SW cor. of the NE of Section 63, Block B-2, H.&G.N. Gulf Production Co.'s No. 2 J. B. Bowers, 990 feet north and 330 feet east of SW cor. of the SE of Section 63, Block B-2, H.&G.N. Same company's No. 3 J. B. Bowers, 330 feet south and east of the NW cor. of the SE of Section 63, Block B-2, H.&G.N.

Hutchinson County

J. M. Huber & Co.'s No. 1 W. S. Christian, 990 feet south and 330 feet west of the NE cor. NE SW, Section 33, Block Y. Skiatex Oil Co.'s No. 9 W. L. Kingsland, 990 feet north and 1,320 feet west of the SE cor., Section 6, Block Y.

J. T. Parks and others' No. 1 Johnson Brothers, 330 feet south and west of the NE cor. of the SW of the SW of Section 34, Block Y, H.&B. Texas Interstate Pipe Line Co.'s No. 1 J. Q. Bost, 660 feet

Why WOULDN'T YOUR PIPE *threads be* DAMAGED...

Shipping, handling and warehousing are an inevitable part of quality pipe manufacture. Every length must run the gamut of careless loading crews, the rough jostle of rumbling trucks not to speak of hundreds of miles of railroad travel—DAMAGED THREADS AND DIRTY COUPLINGS ARE THE INEVITABLE RESULT.

But with the quick availability of Colona Pipe Thread Protectors to all pipe manufacturers, EXPOSED THREADS HAVE BECOME STRICTLY TABOO among careful, progressive pipe manufacturers today.

In fact, wherever you see Colona Pipe Thread Protectors on any make of pipe, you see the most conclusive evidence of good, well made pipe. Colona Protectors protray the manufacturer's pride in his product—Only Colona Protectors give 100 percent protection to both ends and threads.

Colona Protected Pipe deserves your patronage at all times.

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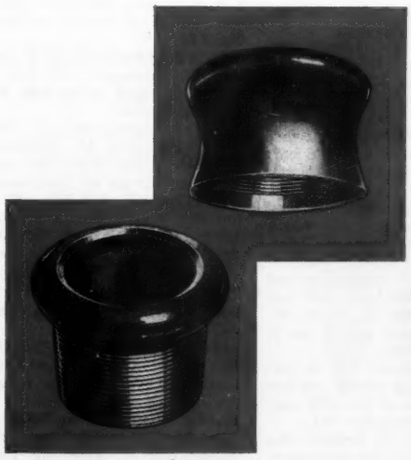

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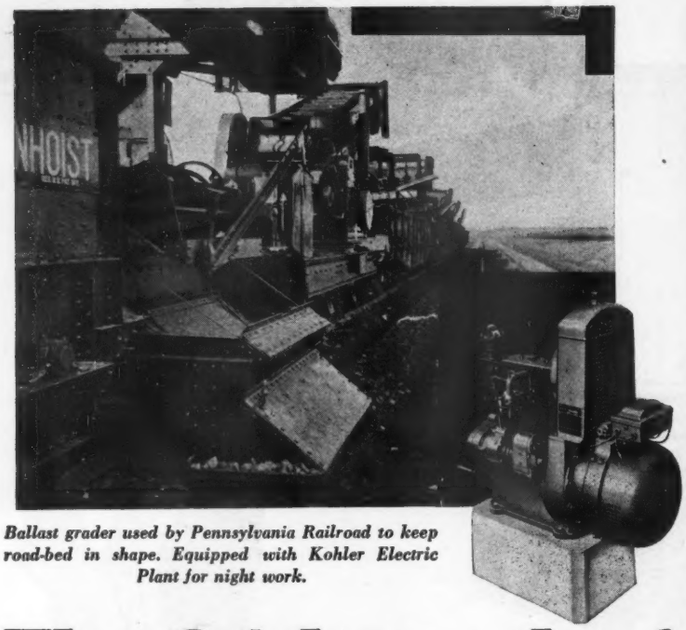

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THIS ballast grader is used by the Pennsylvania Railroad to maintain road-beds over which many of the world's fastest trains run daily. Assisted by spotlights from a Kohler Electric Plant, the crew works in the night hours when traffic has slowed up.

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Kohler Electric Plants generate current at 110 or 220 volts D. C. or A. C. They range in capacities from 800 watts to 10 K. W. Their operation is smooth and sure—as silent as a fine motor-car. All models are compact, rugged and readily transportable. They run without storage batteries. Current is turned on the moment you push any switch in the circuit. For complete information answering your specific needs, send the coupon below. Kohler Company. *Founded* 1873. Kohler, Wis.—*Shipping Point*, Sheboygan, Wis.—*Branches in principal cities.* . . . Manufacturers of Kohler Plumbing Fixtures.

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south and west of the NE cor. of the NE of Section 9, Block Y-2, T.T.R.R. Gulf Production Co.'s No. 2 Sanford-A, 330 feet north and west of SE cor. of Section 83, Block 46, H.&T.C. Texas Interstate Pipe Line Co.'s No. 2 J. T. Sneed, Jr., at the C of the NE of Section 46, Block 6-T, T.&N.O. Same company's No. 1 J. Zofness, at the C of the NW of Section 55, Block 6-T, T.&N.O.

Potter County

M. Spivey's No. 1 Lee Bivins, at the C SW, Section 39, Block M-20, G.&M.

Wheeler County

Murchison & Fain's No. 14 I. Close, at the center of the SW of the NW of Section 82, Block 23, H.&G.N. Murchison & Fain's No. 15 I. Close, at the center of the NE of the SE of Section 83, Block 23, H.&G.N.

Murchison & Fain's No. 1 G. L. Close, C NE SE, Section 5, Block 23, H.&G.N. Survey (shown as I. Close.) J. A. Murphy's No. 1 A. B. Pike, C NE SW, Section 50, Block 17, H.&G.N. Survey. Prince & Adams' No. 3 L. C. Burcham, C SE NE, Section 89, Block 17, H.&G.N. Survey. Wischkamper and others' No. 4 J. W. Curry, C NW SW, Section 53, Block 23, H.&G.N. Survey. Same company's No. 1 B. F. Kiser, 330 feet south and west of the NE cor. SW, Section 33, Block 17, H.&G.N. Survey.

Lone Star Gas Co.'s No. 1 W. L. Cooper, 660 feet south and 631 feet west of the NE cor. of the N half of the NW of Section 80, Block 23, H.&G.N. Murchison & Fain's No. 17 I. Close, at the C of the SW of the SW of Section 76, Block 23, H.&G.N. Upham Gas Co.'s No. 3 Upham Gas Co. (George), at the C of the W half of the SE of the SE of Section 73, Block 17, H.&G.N.

Lone Star Gas Co.'s No. 3 Trostle-Edwards, at the C NE NW, Section 130, Block 23, H.&G.N. Long and others' No. 1 W. L. Willington, 330 feet north and east of the SW cor. S half NW, Section 27, H.&G.N. Murchison & Fain's No. 16 I. Close, at the C NW SE, Section 83, Block 23, H.&G.N.

PANHANDLE, NORTH CENTRAL AND WEST TEXAS

For Week Ending June 18

Corrections

In Archer County: Shell Petroleum Corp.'s No. 2 W. R. Duprest, 150 feet north and 1,044 feet west of the SE cor. of the east 55 acres of the north 105 acres of the north 110 acres of Section 2,490, T.E.&L. Survey. Same corporation's No. 3 W. R. Duprest, 150 feet north and 744 feet west of the SE cor. of the east 55 acres of the north 105 acres of the north 110 acres of Section 2,490, T.E.&L. Survey.

In Archer County: C. E. Bailey and others' No. 1 W. R. Brown-B, 150 feet south and east of the NW cor. of Section 106, A.T.N.C.L.

Archer County—A. P. Nicholson's No. 1 J. C. Stinnett, 750 feet south and 600 feet east of the northwest corner of the W. L. Herring Survey No. 19, A-168. George L. Pace's No. 2 F. C. Green, 150 feet south and 1,950 feet east of the northwest corner of F. C. Green 1,290-acre tract out of Joseph Levins Survey, A-259.

In Brown County: G. Metcalf and others' No. 1 J. C. Beck, 1,138 feet south and 750 feet west of the NE cor. of the T.&N.O. Survey No. 43.

In Callahan County: Goodrum and others' No. 1 R. D. Williams, 450 feet south and 750 feet east of the NW cor. of the NE of Section 26, Deaf & Dumb Asylum Land.

Callahan County—Goodrum and others' No. 2 R. D. Williams, 600 feet north and 1,300 feet east of the SW cor., Section 17, Deaf & Dumb Asylum Land.

In Coleman County: McCamey and others' No. 1 W. B. McClure, 330 feet north and west of the SE cor. of the W. B. McClure 240-acre tract out of the J. B. Beall Survey No. 301.

Coleman County—Prairie Oil & Gas Co.'s No. 1 J. Kellar and others, 160 feet north and 756 feet east of the SW cor., Section 9, A. White Survey No. 161.

In Crane County: C. C. Duffey's No. 1 Cowden Brothers & Co., 580 feet northeast of the southwest line and 1,333 feet southeast of the northwest line of Section 31, Block 2, H.&T.C. Survey.

In Eastland County: Warner-Quinlan Co.'s No. 1 Hitson, 500 feet south and 648 feet east of the NW cor. of the S.P.R.R. Survey No. 1.

Eastland County—Mook-Texas Oil Co.'s No. 11 M. Sibley, 800 feet south and 2,400 feet east of the northwest corner of Lot 19, W. Van Norman Survey.

In Mitchell County: California Co.'s No. 19 E. Morrison, Lease 2, 500 feet south and 1,250 feet east of the NW cor. of Section 27, Township 1n, Block 28, T.&P.

In Montague County: The Texas Company's No. 2-B R. W. Cunningham and others, 150 feet north and east of the SW cor. of its 61.08-acre Lease "B" and located in the L. B. Norton Survey, A-574.

Palo Pinto County—Texas Pacific Coal & Oil Co.'s No. 1 Texas Pacific Coal & Oil Co., 2,150 feet north and 3,800 feet west of the southeast corner of the A. Ashworth Survey, A-1.

In Pecos County: Cardinal Oil Co.'s No. 9 Mrs. F. E. Torborg, 750 feet north and 150 feet east of the SW cor. of Section 539, Arnold & Barrett Survey, A-3.

Pecos County—Dixie Oil Co.'s No. 1 J. H. Tippett, 150 feet south and 750 feet east of the middle of the south line of Section 539, Arnold & Barrett Survey, A-3, , and located in Section 61, Block 194, G.C.&S.F.

In Ward County: Atlantic Oil Producing Co. & Delmar Oil Co.'s No. 7 S. F. Hayzlett, 1,898 feet northeast of the southwest line and 1,475 feet southeast of the northwest line of Section 17, Block 5, H.&T.C. Sid Richardson and others' No. 2 G. W. O'Brien and others, 330 feet south and 993 feet east of the NW cor. of Section 5, Block F, G.&M.M.B.&A. Survey.

In Ward County: Atlantic Oil Producing Co. & Delmar Oil Co.'s No. 7 S. F. Hayzlett, 2,070 feet southeast of the NW line and 1,898 feet northeast of the SW line of Section 17, Block 5, H.& T. C. (Formerly location abandoned May 10, 1930.)

In Wilbarger County: Fain McGaha Oil Corp.'s No. 21 W. T. Waggoner-L, 605 feet south and 600 feet east of the NW cor. of its lease "L" out of Section 31, Block 4, H.&T.C.

Wichita County—T. F. Hunter's No. 12 J. L. and T. J. Waggoner-C, 150 feet north and 1,604 feet east of the southwest corner of Lot No. 1, and located in Lot No. 2, H. George Survey, A-454.

In Young County: Nash & Windfohr's No. 1 R. J. McCloud, 150 feet north and 250 feet east of the NW cor. of B. H. Hammond Survey A-1,320 and located in J. W. Manning Survey A-188, being 216 feet northeast of the NE cor. of G. P. Co. lease No. 11,868.

In Young County: Benson Brothers' No. 1 C. D. Leberman, 1,985 feet south and 1,642 feet east of the NW cor. of Section 271, T.E.&L. C. J. Kliner's No. 2 A. E. Logan, 483 feet south and 1,428 feet west of the NE cor. of Section 2,251, T.E.&L.

In Young County: R. P. Dorian's No. 1 J. P. Dunnagan, 150 feet south and east of the NW cor. S half, Section 199, T.E.&L. Survey.

Young County—T. F. Hunter and others' No. 4 J. M. Bloodworth-B, 150 feet south and 910 feet west of the northeast corner of their lease "B" out of Section 157, T.E.&L. W. S. Brazelton and others' No. 2 J. F. Larimore, 1,050 feet north and 150 feet west of the SE cor. E half NE, Section 2,246, T.E.&L.

GASOLINE FOR JAPANESE BUSES

The Nagoya Junkan Bus Co., the Mie Bus & Motor Car Co. and the Toyohashi Bus Co. have formed a company under the name of Nitto Koyu Kabushiki Kaisha (Nitto Mineral Oil Co., Ltd), capitalized at 200,000 yen, for the direct importation of American Pacific Coast gasoline.

For tanks and all metal surfaces

USE PURE LEAD PAINT

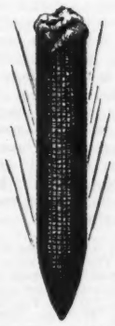
(Eagle Sublimed Blue Lead) for economical rust prevention . . .

Sublimed Blue Lead has had a remarkable success wherever it has been tried in the oil industry. It makes a pure lead, rust-preventive paint with very marked advantages. Quickly thinned to paint consistency, to meet the exact requirements of each job. *Does not harden or liver in the container.* Grips metal surfaces tenaciously, preventing rust and corrosion. Indispensable for priming coat on all metal surfaces, as well as for the top coat. (Painters like it.) Has excellent covering power. Being pure lead, it is the most enduring paint. And its cost per square foot of surface protected is considerably less than other high quality metal paints.

Investigate Sublimed Blue Lead before planning your next metal-paint job. A postcard or letter will bring you a free copy of an interesting booklet "Rustproofing with Sublimed Blue Lead."

Fight bottom water with Eagle Lead Wool

Lead Wool is the efficient, economical, quick method of plugging off bottom water. Fills every water crevice. Sold by dealers with Cartridge Containers to fit all casing sizes. Free folder on request.



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CABLE ADDRESS "EXPLORING" DULUTH

The arrow points to one of the gills of the Byrne Revolving Ventilators. These slits keep it on an even keel while revolving and provide just the right amount of suction.

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Revolving Ventilator built light, strong and compact as an airplane

Over 15,000 Byrne Ventilators are in use, both revolving and stationary—the reason they do the work better.

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The Byrne Stationary Ventilator. Note the size of the weather guard and its sturdy construction.

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Read Classified Want Ads
Each Week

DEVELOPMENT OF FRACTIONATION FOR STABILIZING NATURAL GASOLINE

Prepared by R. H. Pence for The Cooper-Bessemer Corp.*

Absorption Versus Compression

The compression method has, in the past, been adaptable only to rich wet gas while the absorption process is adapted to any character of gas.

"In the case of gallon and a half gas (most plants built in the past five years have been on flush gas and 1 to 1½ gallons per thousand feet) the cost of a compression and an absorption plant are about the same and for leaner gas the latter is considerably cheaper."[2]

The past five years have seen the development of various kinds of fractionating processes for stabilizing natural gasoline. The product of the compression plant yields as easily to processing by this equipment as that of the absorption plant. Gas with an initial gasoline content of 1½ gallons may well be treated by the compression process, particularly if the gas comes from a field where vacuum will be applied and where richer gas may be anticipated. From an economic standpoint this is justified because the compression plant decreases in cost in proportion to the oil plant as the gas becomes richer. The cost and number of compressors depend solely upon the volume of gas to be compressed, while absorption equipment, aside from the low stage compressors, increases in an almost direct ratio with the gasoline production. This statement is made advisedly from practical operations and runs counter to the theories of two of the ablest engineers in the industry. (Reference is made to the theory that oil circulation may be calculated upon the basis of gallons per 1,000 feet of gas. This does not work out with year-around conditions when temperatures rise and when the volume of oil circulated must be increased unless the cooling equipment is built entirely out of proportion. Increasing the oil circulation of course involves increasing all of the absorption-distillation equipment.)

Use With Gas Lift

There are, of course, sufficient offsets to the saving in first cost that would encourage manufacturers to use the absorption process, but such justification would cease when the gas upon testing is found to yield four or five gallons. But there are instances where in recent years compression plants were installed on 1½-gallon gas because of special circumstances, and these circumstances are bound to figure in the types of plants selected in the future. In these cases, high residue gas was necessary. The obvious thing to do was to build up compression plants.

Thus it is that large compression plants were built this year when the process was considered obsolete. Such plants will continue to be built in conjunction with gas-lift stations, gas-reinjection plants, and gas booster stations. In all these enterprises, pressures upwards of 250 pounds are generally required, and what more simple than to throw in intercoolers and fractionating towers, a few storage tanks and a boiler, and save the natural gasoline. The life of a gas-lift station is too uncertain to justify complicated absorption equipment, most certainly so if the gas contains higher than 1 gallon per thousand. When the gas-lift service is discontinued, it is most likely that the gas and oil volumes on the property are so very much diminished that it would be most economical to continue as a high compression plant, but, in any event, if absorption is then indicated, half of the compressor units may be taken out and absorption equipment installed.

This arrangement is receiving consideration not only by producers who operate their own gasoline recovery plants, but by others also. The gasoline plant sells pressure for gas-lift to the producer who disposes of his gas to the gasoline manufacturer, and it appears that this sort of exchange and co-operation will be the order of the day. The producer will have his gas-lift, but he will not have a lot of compression equipment on his hands every time he develops a property. A fair, equitable price on the part of the gasoline manufacturer will result in large economically-operated gas-lift stations, with a minimum of down-time equipment held for emergency. This is a form of unit operation that does not involve the almost insurmountable obstacles presented by unit control in the production of oil.

Same With Gas Drive

Precisely, the same idea may be carried out with respect to the gas drive, where this method of oil recovery is practiced, one plant returning gas at a predetermined pressure to the leases in the unit. There are a number of fields where the surplus gas is being reinjected almost from inception of the field. Where this procedure is indicated, why should consideration not be given to install a compression plant that will serve both the gasoline manufacturers and the producers?

The third situation justifying compression plants on gas containing upwards of 1½ gallons of gasoline per 1,000 feet of gas, is that wherein there is a definite opportunity to dispose of all or a great portion of the surplus residue gas. There are small installations where this might not be justified, but, as a general rule, where the life of the field is expected to be long extended and where the sand formation is known to produce considerable quantities of gas along with the oil, compression would still be justified, at least as long as great volumes of gas could be boosted and sold. If the gas does not increase in richness after several years, the process may then profitably be changed when the income from dry gas sales has about disappeared, but if the content has increased to 3 or 4 gallons, the compression process, as already indicated, will be as desirable as any other and as efficient from the standpoint of net profits.

Stabilizing Raw Gasoline

It is undoubtedly true that the so-called stabilizer had much to do with the rejuvenation of the compression process, as already indicated, will be as desirable as any other and as efficient from the standpoint of net profits.

At first, stability was accomplished by steaming the wild compression product, or by lowering the operating pressure of the high-stage machine. The latter, in cutting down the amount of wild fractions, such as butane and propane, by lowering the partial pressure inadvertently cuts down the yield of the heavier ends. On the other hand, steaming the compression gasoline was a wasteful business because in eliminating the propane gas, a considerable amount of heavier ends was carried off Thus, fractionation, a "method" in use in refineries for cutting products to particular specifications, was finally applied to natural gasoline manufacturing. Many types of refluxers are on the market and available, and many concerns have developed designs of their own and have put to work ideas with reference to fractional condensation and distillation which are age-old and which have been used in solvent recovery plants in the separation of gases of varying boiling points. The impelling aim is to eliminate as much of the propane as possible from the raw gasoline so that the finished natural gasoline shall have in it the hydrocarbons from butane down, and only that amount of butane desired to be retained, as will be dictated by market conditions and the

*This is the fourteenth of a series of articles on air and gas lift. The first article of the series was published in the April 18 issue of The Oil and Gas Journal; the second, May 2; the third, May 30; the fourth, July 11; the fifth, August 15; the sixth, August 22; the seventh, September 12; the eighth, September 26; the ninth, November 14, 1929; the tenth, January 2, 1930; the eleventh, January 9; the twelfth, January 23, and the thirteenth, May 1.

[2]Newton Process Manufacturing Co.

current demand as to the recovery desired.

Stabilizing Gasoline

In order to understand the necessity of stabilizing natural gasoline, the following table of boiling points of the various constituents of natural gasoline is set down so that they may be observed:

Methane	—256.0	Pentane	97.7
Ethane	—119.4	Hexane	156.2
Propane	— 47.4	Octane	257.9
Butane	32.5	Nonane	302.9

It is practically impossible to retain any methane or ethane in the finished product because of the exceedingly low boiling points. However, it is almost impossible to manufacture natural gasoline by any of the known methods without absorbing a considerable quantity of propane in the heavier ends and in the lower fractions of natural gasoline. It is highly desirable to expel all of the propane from the finished product because the propane will eventually evaporate from the body of natural gasoline and in so doing will carry off appreciable quantities of desirable merchantable gasoline.

A rectifying tower has been employed in the last few years for the purpose of rectifying the compressed gasoline without retaining in the product any propane, and, as has already been indicated, only that amount of butane desired, according to the market conditions and the current demand for the various grades of natural gasoline. This tower is known as the stabilizer and permits by a very fine control of temperatures within the tower, the condensing of only the gases within the temperature ranges desired.

Almost any degree of temperature down to 25 below can be attained by the more efficient installations, but temperature alone is not sufficient. It is essential to satisfactory operation that the temperature range be gradual within the tower so that the product may be controlled at will. The low temperatures are achieved by the expansion of the high compression gasoline which is mostly propane and butane.

The propane and that portion of the butane eliminated through the stabilizing process are carried off to the residue system or burned as waste gas. However, the increasing amount of such gas, as a result of the increased demand for more stable producers, has led engineers to try to develop a market for these liquefied gases. Several markets are in the offing.

Plant Operation

The operation in compression or absorption plants is not dissimilar essentially. In the compression plant all the gasoline is fed into the tower. The lowest make is fed in at the lowest point, the recompression at the top, and the so-called low gasoline between these two points. In all events, the making pressure is maintained by regulators until just before the gasoline enters the tower where it is expanded by the pressure drop. At the top of the tower, it is attempted to maintain as nearly atmospheric pressure as possible.

The reflux in the bottom of the tower goes by gravity into an accumulator tank. In this tank, or kettle, the product is steamed by means of enclosed steam coils and such temperature maintained as will give the desired distillation recovery to the product. The vapors steamed off enter the stabilizing tower just above the liquid level in the tower and are cooled as they rise by the gradually decreasing temperatures, whereby some of the vapors are recondensed and trapped back to the kettle or accumulator.

The temperature at the top of the tower is the key to the control of the product. This temperature is affected, first, by the amount of high compression liquid that is fed into the tower, and second, by the expansion within the tower, which latter is in turn controlled by the pressure drop within the tower chamber. It is desired that only enough of the high volatile fractions (composed mostly of propane) be fed into the tower to bring about the desired temperature for fractionating the vapors coming from the kettle. In order to bring this about, only enough gas is taken from the top of the tower for recompression as will serve this purpose, while the rest is turned into the fuel system or burned. In some cases, where the recompression machinery is not loaded, all of the gas is recompressed and all of the high pressure condensate returned to the tower. If this is done, the only gas (propane and some butane) withdrawn from the system is released on the high pressure accumulator tank. If this exit was not provided, the result would be that more and more propane would be kept within the system, with the result that the service of the fractionating tower would be nullified and the product within the kettle or accumulator tank would always be of high vapor tension, high gravity and low recovery. It is essential that some means be provided for withdrawing from the system part of the vapors sifted through the stabilizing tower and only enough circulated as previously stated, to provide ample refrigerant.

Use of Stabilizer

It is erroneous to say that a stabilizer increases the plant production, per se. Unless the plant happens to be oversized and vapors driven off can be rehandled over and over again, the stabilizer makes possible the increase in volume of gasoline sold and otherwise adds economies. Indirectly, the stabilizer should make possible the following:

1. Separation of fixed gases from salable gasoline.
2. Control of the product.
3. Economy of steam as against steaming for product control.
4. Liquefaction of propane-butane for sales purposes.

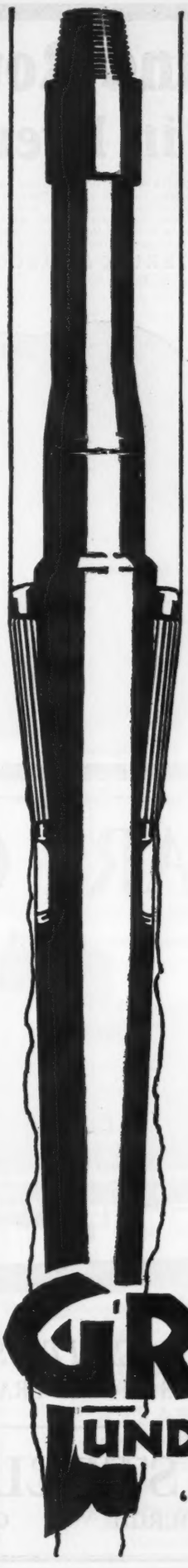
Given the proper stabilizer it is important that the operating conditions be religiously observed. The machine should be automatic as far as possible, but like all automatic equipment must be checked often. Once the temperature which achieves the most efficient separation is ascertained, the controller on the "high" gasoline feed is set so that the desired temperature may be obtained. The steaming of the kettle or in the base of the tower should also be automatic. While it is possible to control the temperature by the gravity of the liquid, this refinement has not yet been installed in connection with a stabilizer. Instead, a series of distillations are run until a given temperature of the liquid yields a product of the desired "recovery."

"In some new plants where the gas is high in gasoline content, it is proposed to treat all raw gas through fractionating towers in order to increase the efficiency of extraction. This, together with the other uses to which the compression can and is being put, makes one feel that it is undoubtedly too early to hold obsequies for this process."[4]

"Dry gas forced into the well in the gas-lift cycle first makes contact with hydrocarbon vapors which have volatilized from the crude oil. Part or all of these vapors will be absorbed by the influent gas. The gas then passes to the foot of the tubing where an intimate admixture of the gas and oil begins and continues with the flow up the tubing until the gas and oil are separated in a trap. During this intimate contact the gas absorbs gasoline vapors from the oil and part of the gas is dissolved in the oil, the quantity dissolved being largely dependent upon and increasing with the pressure. As the gas and oil reach the head of the tubing and flow into a trap, the pressure approaches amtospheric and the dissolved gas, enriched with gasoline vapors, is released from the oil. The quantity of vapors entrained in both the gaseous and dissolved portions of the gas varies with conditions of pressure, temperature, volume and characteristics of the gas and oil, also with time of contact between gas and oil. The quantity of gasoline vapors carried will average well over 1.5 gallons per thousand standard cubic feet of gas.

"The recovery of this gasoline content will, in the large majority of cases, more than defray the expense of gas compression. The cost for compressing 1,000 feet of free gas to 250 pounds is 3 to 4 cents. If the cost of the compressor installation

[4]Emby Kaye, Skelly Oil Co., The Oil and Gas Journal, October 16, 1927.



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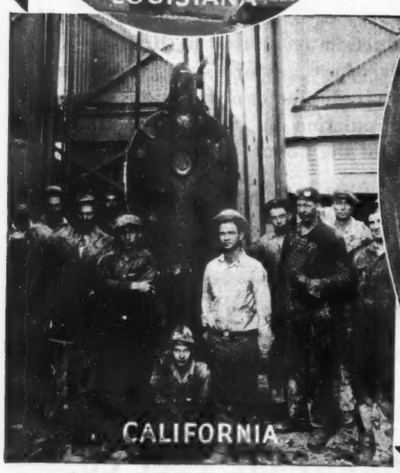

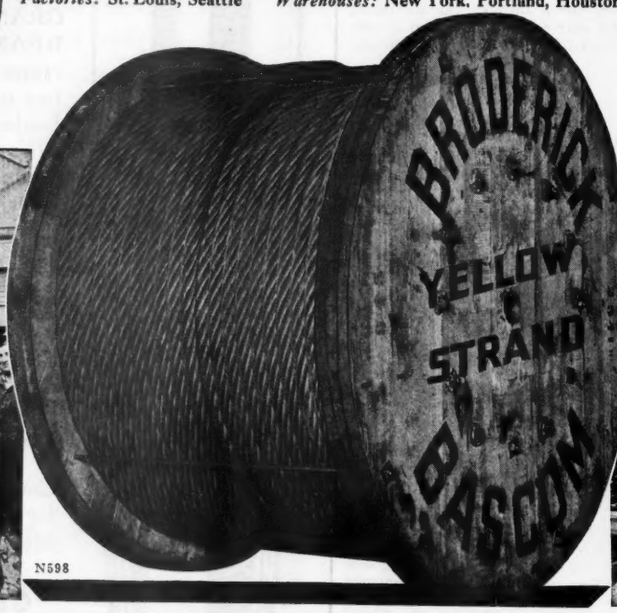

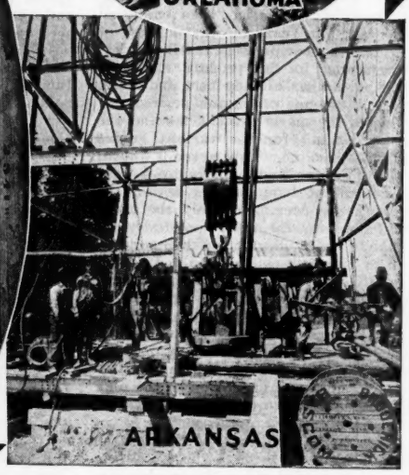

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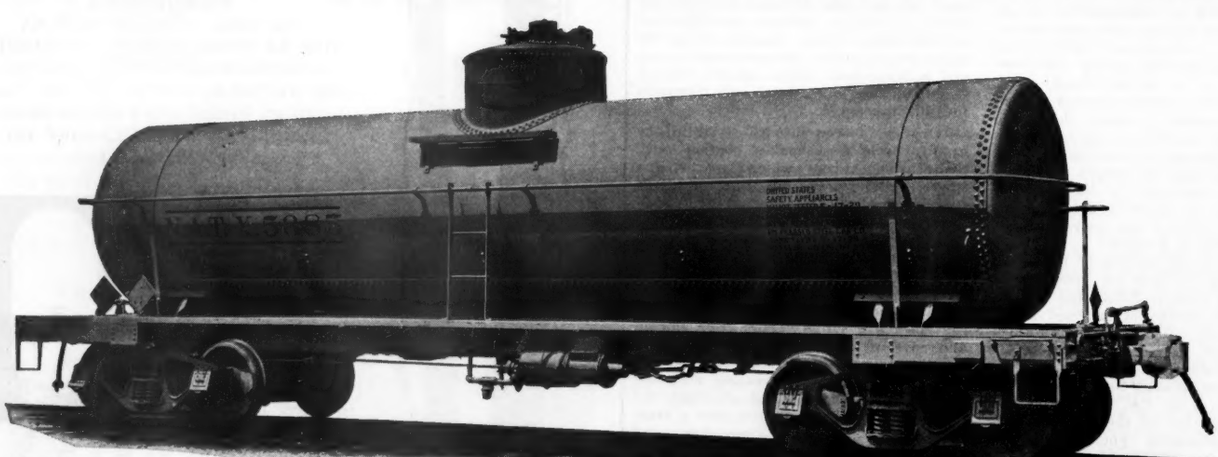

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and maintenance were charged entirely to the oil produced, the burden would in many cases prohibit the gas-lift system. The incorporation of a gasoline recovery plant in the system will show a substantial profit even with low oil production.

"In the writer's opinion recovery is most satisfactorily obtained by passing the 'wet gas' through the absorber of an oil absorption plant. The gas is compressed to that pressure determined to be most suitable for the gas-lift of the particular well. It is forced into the well either through the tubing or through the space between casing and tubing, depending upon well conditions. It flows with the oil into a trap where separation from the oil is accomplished. The gas is compressed to a satisfactory absorption pressure, say 35 pounds, is cooled, and passed through the absorber where the gasoline content is stripped off. The gas then flows back to complete the cycle at the high pressure compressors."[5]

Testing for Natural Gasoline Content

A number of different methods are used for determining the gasoline content of natural gas. All of them give approximate results due to the variations of constituents in natural gas. For this reason there is no standard test in use. Some methods give better representative results than others and hence in given localities different methods are in use.

The various methods are:

1. Specific gravity determination of the gas.
2. Solubility of the gasoline and other heavy constituents of the gas in oil, and measurement of the gas volume loss[6], or
3. Compressing the gas by means of a portable compressor.
4. Absorption of the gasoline constituents in oil and recovery of the gasoline absorbed by distillation.[8]
5. Absorption of the gasoline constituents in charcoal and recovery of the gasoline absorbed by distillation.[9 11]
6. Low temperature fractionation of the gas into its different components.[10]

The methods 1 and 2 are very rough tests and are used only to get an idea of the gasoline centent and are followed by one of the other tests.

The compression method is only employed when the gasoline content is to be extracted in a compression plant.

The methods 4 and 5 are applicable to any type of gas. The charcoal method 5 is the most used and gives very acceptable results.

The low temperature method is used only for reference and is not used generally.

Testing Vapor Pressure of Gasoline

The subject of vapor pressure of natural gasoline is one that has been given a great deal of study. The present practice of using the so-called standard vapor pressure bomb for determining the vapor pressure of gasoline has not been satisfactory as it does not give consistent or accurate results. The industry is now casting about in an effort to establish some method that will prove acceptable.[12 13] However, an old easy method is given here.

Liquid condensate from natural gas or from casinghead gas of oil wells, made either by the compression or absorption process, alone or blended with other petroleum products, may be shipped in ordinary tank cars when the vapor pressure at 100 degrees Fahrenheit (90 degrees Fahrenheit November 1 to March 1) does not exceed 10 pounds per square inch and in insulated tank cars when the vapor pressure does not exceed 15 pounds per square inch. For taking vapor tension, the apparatus required consists of 2-inch iron or steel pipe with a 2-inch solid cap placed over the bottom and a 2-inch by one-eighth inch reducing coupling placed securely over the top. From the top of the tube a short connection of one-eighth-inch pipe is made to the gauge. A 3-inch 30-pound known as inspector's gauge is used. All joints must be entirely tight and those between the pipe and cap are best sealed with solder. When it is impossible to lower the tube directly into the storage tank, a tin cylinder 12 inches by 3 inches is convenient for filling the tube and can also be slipped over the outside and used as a carrying case. A small cover three-fourths inch deep and fitted to the bottom of the tin cylinder may be removed and used for measuring one-tenth of the capacity of the test tube. In addition to this a small tin funnel 2½ inches in diameter with a stem 3 inches long and three-sixteenth inch in diameter is convenient for use in filling the tube.

Where it is possible to do so, lower the tube into the storage tank in an upright position by means of a cord or wire. Leave the tube entirely submerged for several minutes, to brings its temperature to that of the gasoline. Remove from the storage tank and pour off sufficient liquid so that the tube will contain 90 per cent of its capacity. A small measure having a capacity of 10 per cent of the tube should be used for this purpose.

In case it is impracticable to lower the tube into the storage tank, draw the liquid into the tin container as noted above and fill the test tube to about one-half its capacity. Shake the tube and contents gently in order to bring the tube to the temperature of the gasoline. After standing for several minutes, remove all the liquid from the tube and draw an additional fresh sample from the storage tank. Fill to overflowing, withdraw one-tenth as in the previous operation, and screw gauge tightly into position, using liquid shellac on the joints to insure a tight fit.

Submerge the tube in water at a temperature of 70 degrees Fahrenheit and allow it to remain for five minutes, then remove and unscrew the gauge sufficiently to momentarily relieve the pressure indicated by the gauge and immediately screw the gauge tightly into place. The pressure at 70 degrees Fahrenheit should be noted on the shipping memorandum. Place the tube again in the water at a temperature of 100 degrees Fahrenheit (90 degrees Fahrenheit from November 1 to March 1) and maintain the temperature at 100 degrees Fahrenheit for 10 minutes. Tap the gauge lightly with the fingers and read the pressure. This pressure also must be noted on the shipping memorandum, it being the vapor tension of the sample taken. In making tests, the level of the water in both cases must be just below the lower end of the pressure gauge and the temperature kept constant.

A correction of pressure figures should be made according to the initial temperature of the gasoline. This correction should be as follows:

For tests on samples taken at a temperature of 50 to 59 degrees Fahrenheit, inclusive, deduct one pound.

For tests on samples taken at a temperature of 40 to 49 degrees Fahrenheit, inclusive, deduct two pounds.

For tests on samples taken at a temperature of below 40 degrees Fahrenheit, deduct three pounds.

There is some question as to the vapor tension test being the proper one to be made and for a matter of record, it is advisable to make the same test on another sample excepting that after closing the tube the first time, it is placed directly in water at 100 degrees Fahrenheit and the pressure read after 10 minutes.

Full responsibility for knowing the vapor pressure of the liquid shipped and that it is in its proper container rests entirely on the shipper who must provide facilities and require tests to be made of their products. The Bureau of Explosives, 30 Vesey Street, New York City, issues a copy of the regulations of

[5] By N. M. Floyd, C. F. Braun & Co.

[6 8 9] See "The Recovery of Gasoline From Natural Gas," by George A. Burrell, Chemical Catalog Co., New York City.

oil volume increase.[7]

[7] "Handbook of Casinghead Gas," by Henry P. Westcott, Third Edition, p. 141, Metric Metal Works, Erie, Pa.

[10] See "Analytical Gas and Gasoline Fractionation at Low Temperatures," by Lester O. Warner, proceedings of the California Natural Gasoline Association, November, 1927, meeting, Los Angeles, Calif.

[11] "Tentative Standard Pressure Charcoal Test for Natural Gas Gasoline Content," by P. S. Magruder, California Natural Gasoline Association, November, 1927, meeting, Los Angeles, Calif.

[12] "The Recovery of Gasoline From Natural Gas," by George A. Burrell, Chemical Catalog Co., New York City.

[13] "The Determination of Vapor-Tension of Volatile Fluids," by C. D. Gard, proceeding of the California Natural Gasoline Association, 1927 Fall meeting, Los Angeles, Calif.

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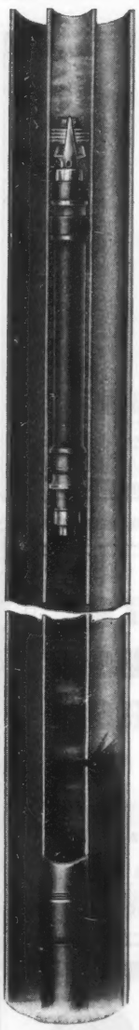

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Analytical Distillation of Gasoline

The methods commonly used for this procedure vary widely and frequently result in loss to both manufacturer and marketer. Reference for procedure in this test may be had from the manufacturers of distillation equipment, the Bureau of Mines, or some standard book on gasoline recovery.

BUREAU OF STANDARDS EXPLAINS STABILITY TEST

(Continued from Page 119)

samples 1 and 2, which were taken from the same engine, may have been due chiefly to fibrous material which contaminated the oil and collected on the oil strainer. Samples 3 and 4 represent the material removed from the oil filters of two other engines. The last three samples represent cases where a heavy semi-solid emulsion was formed in the crankcase. From these data it appears that the solid portion of the sludge produced in the engine is composed largely of material insoluble in cholorform and is different in character than the pricipitate produced in the Sligh test.

The chloroform insoluble portion of the sludge formed in the engine is probably composed of (1) coke from "cracking" of the oil, (2) "varnish," (3) dirt, and (4) wear material in the form of metal, metallic oxides, or organic salts. The relative proportions of these possible constituents were not determined. If coke predominates, it would seem that "cracking" may be more important than oxidation in the formation of sludge. On the other hand, if "varnish" or metallic salts of organic acids predominate, it would seem that an oxidation test at a higher temperature or an evaluation of the acids produced by oxidation would be desirable. However, the data given here are too few, and too little is known of the oils from which the sludges were produced, to form a basis for any conclusions.

In connection with the engine tests on lubricating oils now being conducted at the bureau, it is hoped to obtain sufficient data to show correlation or lack of it between the oxidation number and the deterioration of an oil in an engine.

[4]T. S. Sligh, Jr., Proc. Am. Soc. Test. Mat., V. 24, pt. 2, p. 962 (1924).

OPERATIONS IN TENNESSEE

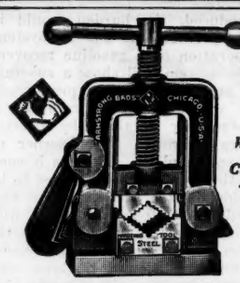
SUNBRIGHT, Tenn., July 5.—In the field at Sunbright, Morgan County, Tennessee, there are four companies operating and recently Benedum & Trees drilled in a 5,500,000-foot gasser 2 miles west of Sunbright. Messier & Johnson have just finished a well on the Lynch farm. The Rock Creek Oil Co.'s No. 2 on the Bradford farm made 500,000 feet of gas and about 5 bbls. of oil. No. 1 on this tract is being pumped every day. In the past few months eight gas wells ranging from 1,500,000 feet per day to 5,500,000 feet per day have been brought in.

Messier & Johnson have resumed operation on the Sam Galloway farm and are down about 1,300 feet. About eight rigs are in the field and being moved to new locations as soon as wells are completed.

It is stated that there is an excess of 15,000,000 feet of gas available now, and all details for the franchise to pipe natural gas from the Sunbright Field to Chattanooga, Tenn., have been finished.

ENTERING ALBERTA FIELD

NEW YORK, July 7.—The Texas Company will enter the Alberta oil fields in Canada with the drilling of three test wells 7 miles west of Lethbridge. Prairie Oil & Gas Co. is also entering Alberta, with Hudson's Bay Marland Co. also planning drilling operations in the area. Imperial Oil, Ltd. will undertake a drilling program in the same area in which The Texas Company is initiating its Alberta operations.



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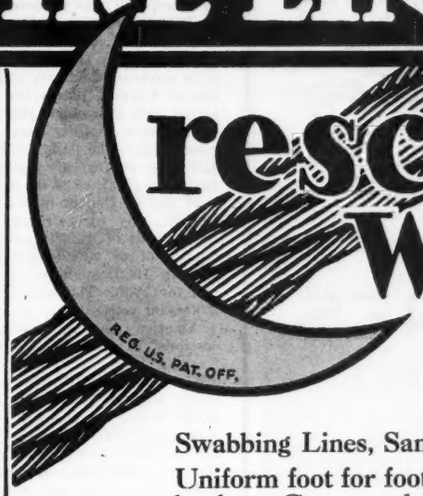

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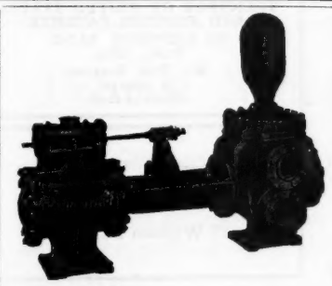
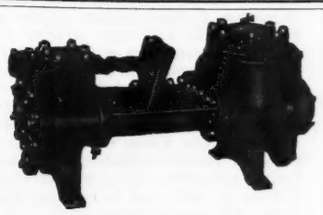
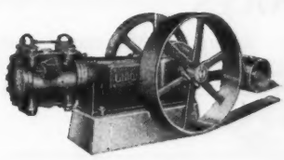
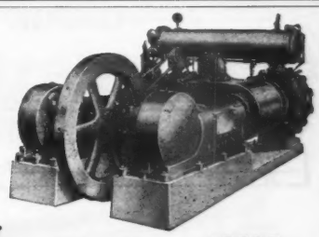
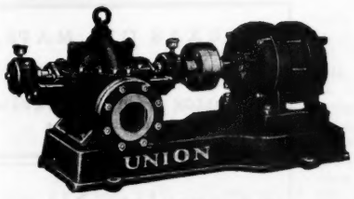

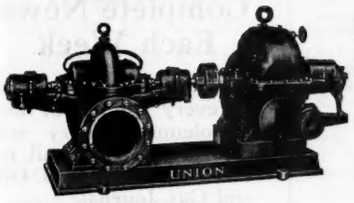

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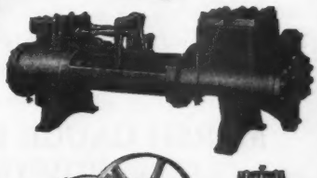

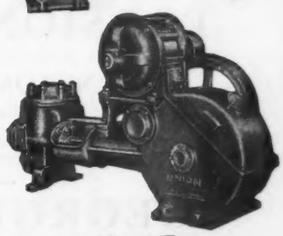

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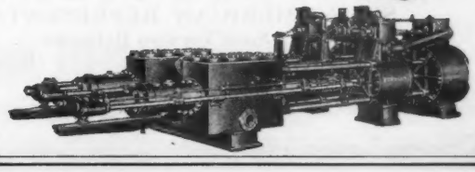

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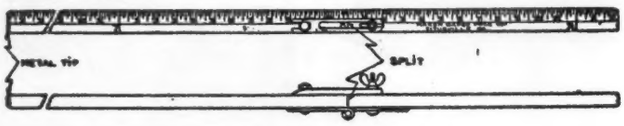

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AMERICAN OPERATIONS IN OLDENBURG, GERMANY

Latest developments in Oldenburg, Germany, were set out in a recent speech by Doctor Benz, the petroleum expert of the Oldenburg government.

Up to now, wells have been sunk in Wietzen, Haenigsen and Oldenburg. In Wietzen it was necessary to sink more than 500 meters, in Oldenburg from 900 to 1,000. The oil production of the Wietzen well was reduced because of the faulty construction of the shafts and the seeping of oil in sand. That of the Elverath boring in Haenigsen showed a paraffin content of 4.2 per cent. Since there are no German plants for the freeing of oil of this substance the output of the well cannot be fully made use of. As a consequence, the daily production is only 120 tons, against a capacity of 260, and the price obtained is 60 marks, compared with 112 to 130 for oil with low paraffin content. By intensifying operation and by removal of paraffin, the German production of oil, which amounted to 105,000 tons in 1929, ought to increase to 200,000 for 1930. The imports total roughly 2,500,000 tons.

American companies were granted concessions in those sections only where German interests are not boring. These are concerned with areas to which much costly boring will have to be done. Since wells drilled to a depth of 800 meters cost about 200,000 marks, and 30 to 40 borings will have to be made, more capital is needed than German factors are willing to risk or can raise. These concessions are therefore being given to American firms.

The contract of the Oldenburg government with the Americans stipulates the drilling up to 1,000 meters of five wells within that number of years, the first of these immediately. The right to operate is granted upon the payment of an annual sum to the state and the deduction of 5 per cent of the gross profits of the project for the owners of the property. Halting of the drilling operations is under the jurisdiction of the government expert. The American companies have obligated themselves to make reports on the proggress of wells and upon striking oil to permit the investment of German capital. This option was granted to a banking establishment in Hamburg. Similar contracts have been made by Braunschweig and Meckleburg with American interests. The Protective Union of Mining Concessions in Hannover has also designated certain obligations in connection with the sinking of wells and is exacting demurrage.

OIL AND GAS ROYALTIES IN ITS SECOND EDITION

The second edition of "Oil and Gas Royalties," by Attorney Samuel H. Glassmire, Tulsa, is off the press of the Thomas Law Book Co., St. Louis, Mo. It is designed by the author to serve as a practical textbook covering every question concerning petroleum royalties, making it a valuable reference book for oil operators, royalty owners and lawyers. The original text of the first edition, published in 1927, has been rewritten and enlarged, citations to the controlling court decisions of the various oil-producing states have been selected carefully and an alphabetical table cases and a general index have been inserted.

Conflicting rights accruing under oil and gas mining leases, mineral deeds and royalty conveyances are carefully distinguished and discussed. The law of oil and gas royalties is presented and applied in practical form. The work is divided into three parts: Kinds of royalties, nature of royalties, and incidents of royalties. The price of the book is $3.

TOWNSEND ON COMMITTEE

C. E. Townsend, Sun Oil Co., Philadelphia, Pa., has been appointed a member of the Committee on Fire Prevention in Marketing of the American Petroleum Institute's Division of Marketing. R. A. Wotowich, H. L. Doherty & Co., New York, is chairman of the committee.

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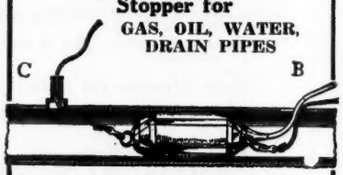

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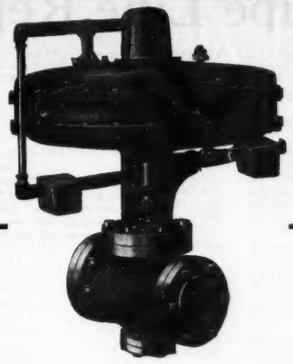

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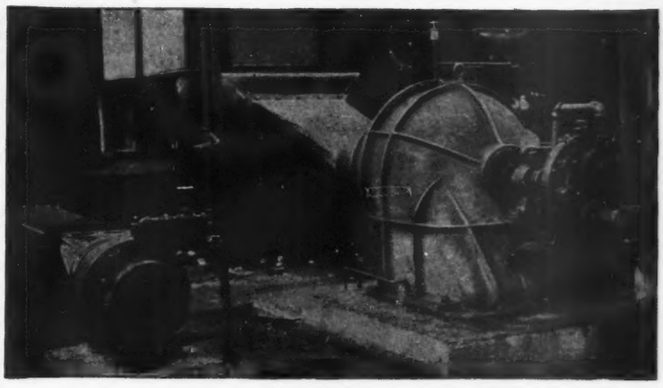

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